THE BUILDER
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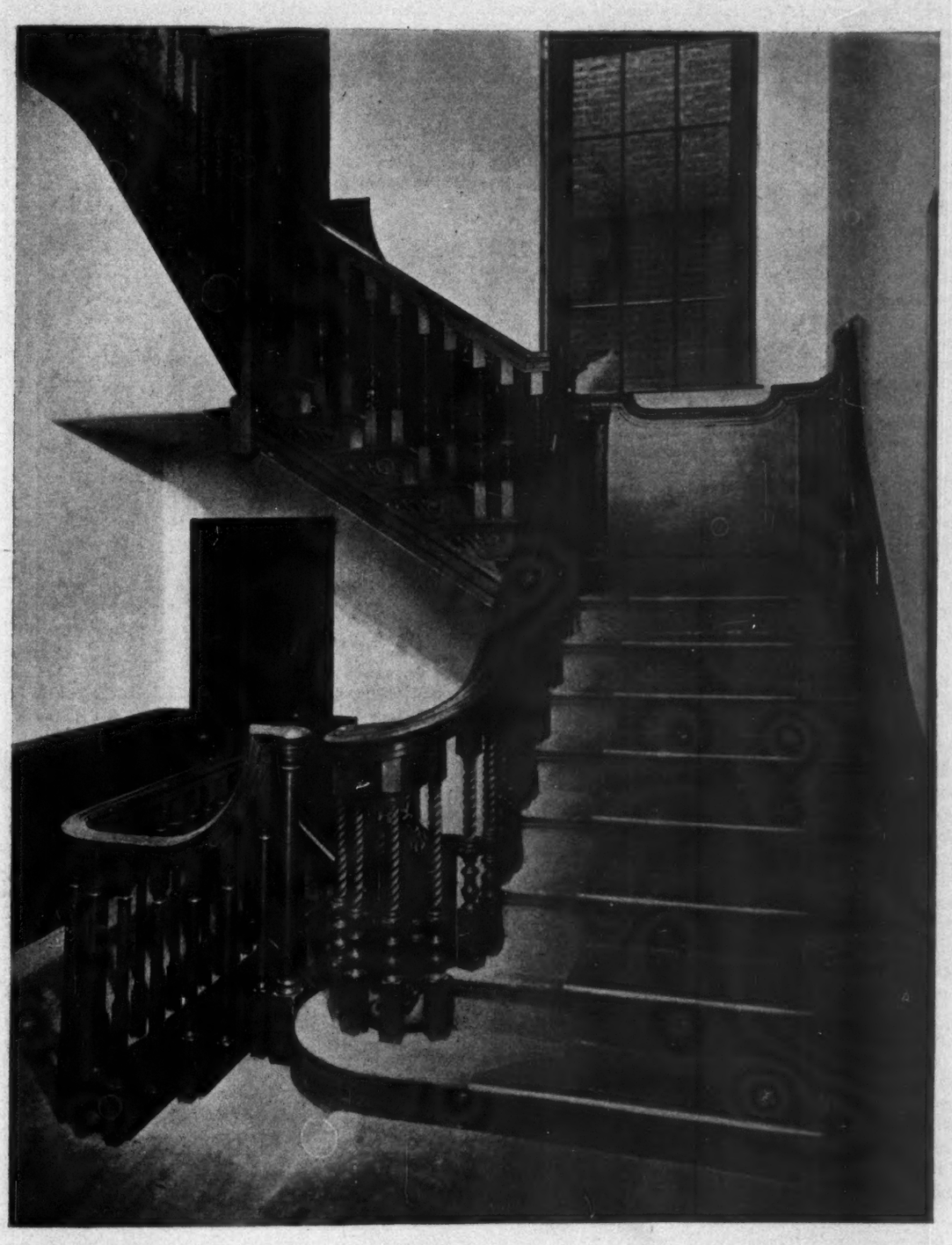


The Old Staircase (early 18th-Century), No. 1, Lincoln's Inn Fields. (*See page* 986).

MEETINGS

FRIDAY, *December* 18.

London Society. Sir Owen Williams on "The Portent of Concrete." 5 p.m.

WEDNESDAY, *December* 23.

Architectural Association. Christmas Party for Children of Members.

MONDAY, *January* 4.

Hammersmith Public Lectures. Mr. Percy Lovell on "The Bridges of London." At the Central Library, W.6. 8 p.m.

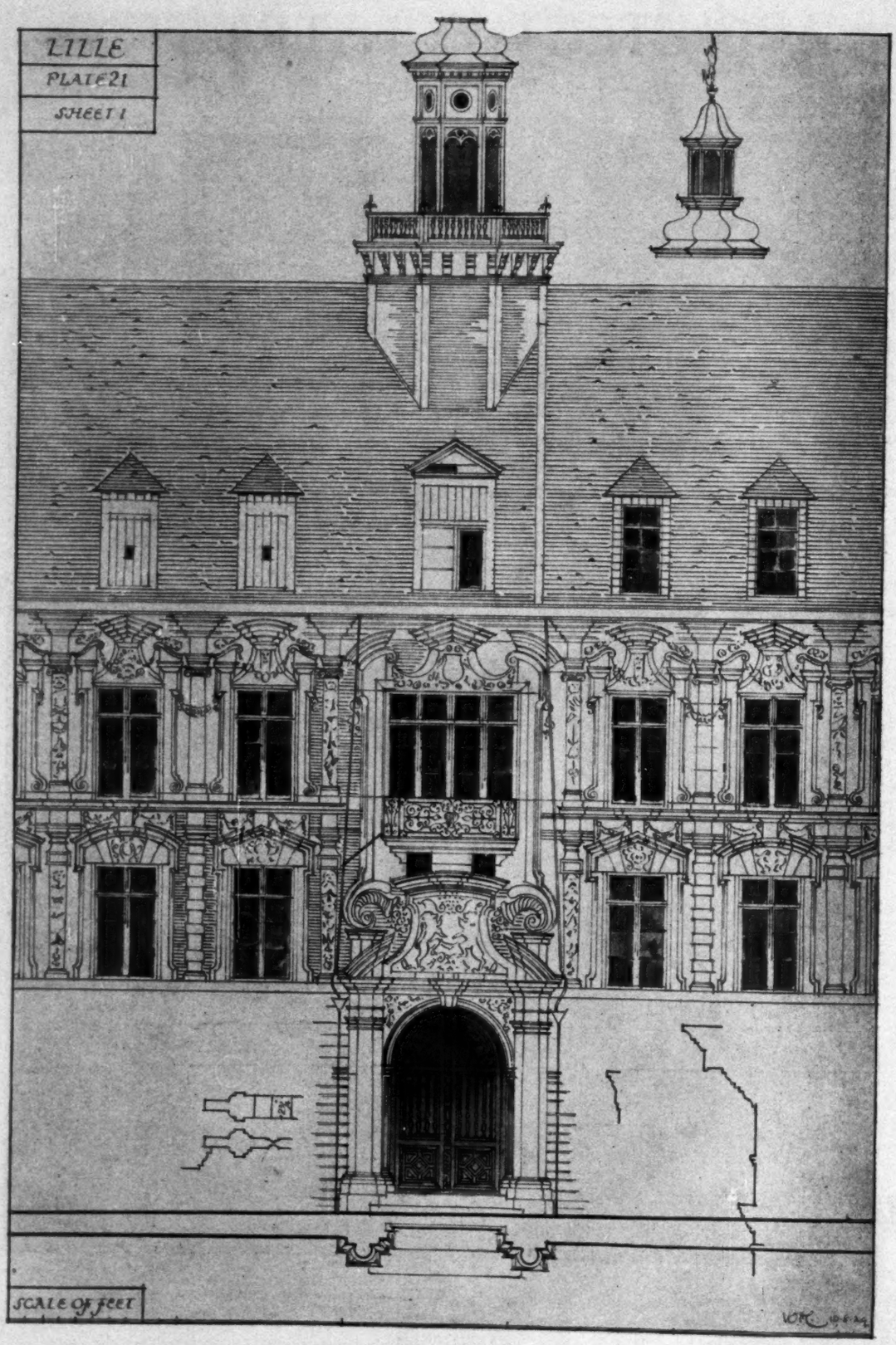
Royal Institute of British Architects. General Meeting: Award of Prizes and Studentships. Criticism by Mr. E. Berry Webber on Work submitted for Prizes and Studentships. 8 p.m.

WEDNESDAY, *January* 6.

L.C.C. Central School of Arts and Crafts. Sir Banister Fletcher on "German Renaissance, 1500-1900." 6 p.m.

FRIDAY, *January* 8.

Institution of Structural Engineers (Midland Counties Branch). Mr. H. E. Brooke-Bradley on "Bridge Foundations." At Derby.



The Bourse, Lille, France.

Measured and drawn by Mr. W. H. Cowlishaw.

(*See page* 988.)

WORKING AND LIVING

At no period within the memory of our readers has there been so much anxiety concerning the financial stability of the nation and its ability to weather the extraordinary conditions at home and abroad. For ten years we have seen a more or less continuous struggle against an industrial trade depression—a struggle that apparently brought about its inevitable crisis a few months ago.

Many times, during recent years, we have felt compelled to express our feeling that a great and healthy civilisation could not live, in the fullest sense, without the arts and graces of life, and that these were ceasing gradually to have a place in our lives. On the other hand, we have felt that our expressions of disappointment became almost out of place amidst the daily jargon of ways and means. The problem of working and living has become the one problem, and almost the sole topic of conversation in our lives. It is a problem that none of us can afford to ignore when the very existence of our country is at stake.

These thoughts arise as we read "The Road to Prosperity," a book which we review in another column (p. 1008). In this we are brought nearer to the plain facts of working and living, where, in fact, the dismal science of economics does not weary us. No one can submit a number of simple facts and home-truths and expect that everyone will agree with them; there are, in these days, far too many popular theories and prejudices to be exploded. Moreover, there are, we firmly believe, too many matters affecting our industrial prosperity, matters which cannot come within the region of practical politics, so far as legislation is concerned.

Everyone, we think, will admit that for many years we have, as a nation, been skirting round the main problem, willing to tinker with any artificial remedy rather than face what appeared to be the real remedy, *i.e.*, the reduction of the present wage basis—a remedy which seemed to be too drastic and against every humane feeling. Many people have long been awaiting a reasoned theory which would prove—what almost seems to be Gilbertian—that if we reduced our wage basis we should earn more and develop a still higher standard of living. All of us, no doubt, have at various times flattered ourselves that we were "seeing the world steadily and seeing it whole," and yet have found ourselves a long way off what was really a simple issue. At these times we are thankful for a simple corrective. There are, and obviously must be, some fundamental principles upon which the joy (or the penalty) of working and living is based. We confess, therefore, that we appreciate the apparently sane and healthy outlook of the authors, who give us the impression that we have been seeing the whole of our industrial troubles upside down. The most arresting and disturbing thought to us arises from the statement that unemployment is a self-inflicted disease. It is a condition that can be produced at any time, and it is not a calamity that must be endured with complacency. We have merely to place a high enough price upon our services to ensure that these services will not be required. As a home-truth it seems to throw a fresh light upon our industrial problems. It would seem to postulate at least that the responsibility upon us should be heavy if we refuse to find a market at anything but our own figure. We can deny the postulate, and we might be able to sustain an argument that our particular figure and demands come first, and that the work we seek must come from somewhere, somehow. This line of argument has had a prolonged test; the list of unemployed, the dole, the condition of trade, and the finances of the country would seem to us to supply the complete answer.

The sociological aspect of the problem is closely interwoven with this habit of placing our own conditions first, either in the form of an arbitrary wage basis or in the form of social services. Again we see first things placed first. We quite agree that standards of living to-day can have no real meaning in terms of working and living if a large proportion of workers are supported on the dole, and if we cannot afford to build houses without the help of Government subsidies. Many of us have been led to believe that a higher standard of living was discovered during the last decade, and that it was almost the last word in civilisation or social progress. We are asked now to consider, not whether we have created a higher uniform standard of living, but whether we have created a lower standard, along with a hopeless condition of unemployment. We believe with the authors that there is neither a minimum standard of living nor is there a final or ultimate standard. Or, to put it in their own words, "There is no standard that is not earned . . . and it can be any standard that the workers desire."

For those readers intimately connected with the art of building, there is an important significance attached to any theory which throws a fresh light upon industrial economics and the social structure. The art of building cannot thrive—at least as a healthy development—where the whole fabric of industrialism and finance has broken down. There is no doubt that art of every kind is languishing to-day. Many reasons might be given for this, but at least it is certain that art is at a discount when a nation is unable to find work to provide a living. Fine art becomes a luxury.

It is customary to give a blessing to those conditions that have compelled us to develop a lean and stark architecture that is businesslike and suits its purpose. We grant the corrective value of the limitations of economy that make us contrast our art with the flamboyant efforts of the Victorian age. Even so, there is a danger in making a virtue of necessity. No one can doubt that financial conditions have produced a meanness in many buildings that is undeniably cheap and shoddy. It surely cannot be a sound argument in the philosophy of architecture that, because some architects cannot be trusted to spend money gracefully and with taste, we should therefore be doomed to poverty and mean materials. The loss of traditional materials in many districts, through high costs, is one of the distressing developments in a country that has felt the pinch of economy.

We do not imagine that anyone connected with the art of building derives any particular satisfaction from the knowledge that for many years the Government has been compelled to contribute towards the cost of building houses. It is not a healthy condition and no one could look forward to a future in which we never would be able to afford to build our own houses. There can be no doubt that the costs of building have restricted the amount of building and its quality.

In the final issue, the building trade and the whole art of building are bound up intimately with the prosperity of industrialism and the whole country. Any serious contribution, therefore, which gives us a new outlook upon the present economic conditions and the social structure is worthy of careful attention. It is a hopeful outlook, in the sense that it is believed that the disease is not incurable, and that the remedy lies in our own hands: it is not the negative policy of *laissez faire*. It is the healthy outlook of a healthy State that has an intelligible and rational conception of the main considerations in life—working and living.

NOTES

The Royal Gold Medal, 1932.

Not architecture only, but town-planning is honoured by the announcement, made publicly on Monday night at the Royal Institute of British Architects, that the Council of the Institute propose to submit to the King the name of Dr. Hendrik Petrus Berlage, of Holland, as a fit recipient of the Royal Gold Medal for 1932. Dr. Berlage, who is seventy-five, is well known to British architects, not only as Hon. Corresponding Member, R.I.B.A., for Holland, but also on account of his activities in the cause of International Town-planning. He is an Honorary Doctor of Philosophy of the University of Groningen, and an Honorary Doctor of Technical Sciences of the University of Delft and the High Technical School of Vienna. He is now occupied on the erection of the Museum at the Hague. His reputation both as architect and town-planner constitute him a worthy successor to such foreign gold medallists as M. Victor Laloux, Professor Ragnar Ostberg, and the late Thomas Hastings.

Design at the Academy.

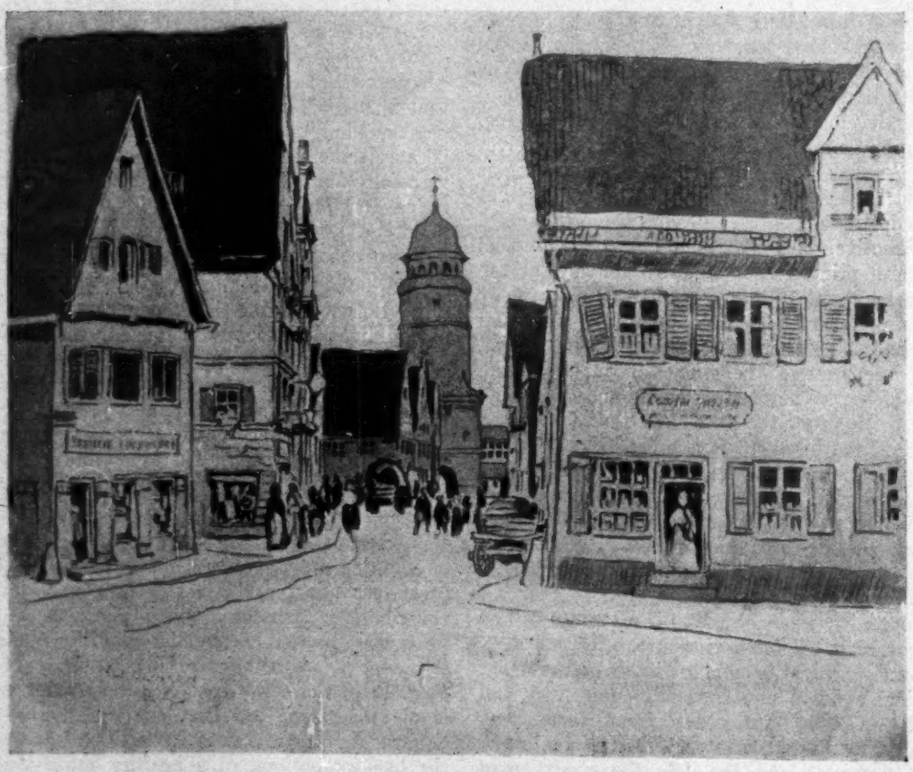
Whilst we must say that there is nothing in the work of the Royal Academy students which touches a high note of achievement, there is reason for some degree of hopefulness in the work of the architectural students. It is a gold medal year, and an excellent design for a London club-house marks the work of the winner of the gold medal and travelling studentship, Mr. William Frederick Howard, whose well laid out plan and refined, well-proportioned elevations show some well-balanced design again to the front. There were some good designs from the upper and lower schools, and these all show a sense of the basic principles of good design. There is again no competition for perspective drawing. There is some falling off in the decorative drawings, and we are inclined to think there is a lack of necessary enthusiasm in the students' efforts. In the matter of good composition and quality of drawing, there has been a lack of higher ideals for the students.

An Eighteenth-century Staircase.

The staircase at No. 1 Lincoln's Inn Fields (see page 983) dates from the first quarter of the eighteenth century. As in the case of so many fine old London interiors the woodwork, which includes also one or two carved doorcases, has been overlaid through many generations by successive coats of paint and some sixteen of these accretions have been removed. The woodwork, as now restored to its original condition, affords a good example of the interior decoration of the period. The house, which during the greater part of its history was used as a private residence, is now occupied as offices. In one of the rooms on the first floor, which are now restored to their original character, the panelling is free from ornamentation to the verge of plainness and the carving is almost entirely restricted to the woodwork of the chimneypiece. In another room on the same floor, however, the door with its overdoor, and the panelling, which is brought up only to chair-rail height, are all richly carved. The wall above the panelling and the ceiling are interesting examples of early eighteenth-century plasterer's work. The staircase which we illustrate is contemporary with the rest of the woodwork, and has also been restored to its original condition by the removal of superfluous paint.

The National Burdens on Trade and Industry.

At the annual general meeting of a well-known company the chairman, Lord Greenwood, was able to lay before the shareholders in a very concrete form the burdens borne by trade and industry. This company has had a record year, the net profit being £104,665, but the chairman explained that before arriving at this figure the following sums had had to be provided for:—Income Tax, as estimated for the year in which the profits were earned, £40,000; Schedule A tax on the properties owned by the company, £7,486; National Health and Unemployment Insurance, £14,377; local rates, £46,577—a total of £108,441, or rather more than the amount of net profit for the year. Do these figures present a case for further taxation by means of the land tax? But in relation to the above figures we must also examine the position of the "rentier," who is supposed to fatten on industry at the expense of others. The shareholders receive for the year a dividend of 5 per cent. less tax on the ordinary stock, representing the sum of £46,875, and the balance is carried forward. We refer



Nördlingen.

From a water-colour drawing by Mr. E. Guy Dawber, A.R.A., P.P.R.I.B.A.

to this company only because the figures are presented in a very striking form, and they relate to a year of exceptional prosperity for this undertaking, a unique experience in the present time when a common experience is the passing over not only of "ordinary" share dividends but also on some preference shares. During the last election much was made of the position of the "rentier," as it has become popular in certain circles to denominate any person who has saved and invested his money, as possessing a mine of wealth, and preference shareholders were especially marked down as prey, although, as in this company, the interest on the preference shares is usually paid less tax; but surely such figures as the above must convince any reasonable person that the limit has been reached in the imposition of burdens on industry.

Dinkelsbühl.

From a water-colour sketch by Mr. E. Guy Dawber, A.R.A., P.P.R.I.B.A.

A Proposed Addition to the British Museum. We stated last week that a new home for the Elgin Marbles at the British Museum may be provided at the cost of an American donor. A correspondent, writing to a contemporary, says, "the existing gallery in the British Museum appears to exhibit the Marbles so that they can be admired and studied remarkably well in their entirety and free from the intrusion of other sculptures. The gallery is provided with an excellent model and directions to aid the public in visualising the original position and grouping of the Marbles." Moreover, the offer of this new building carries with it a suggestion or condition that it should be designed by an American architect. The fact that this architect has designed the donor's home in America is surely not sufficient excuse for overlooking a possible design by Sir John Burnet.

Russian Regimentation. In these pages last week we gave some excerpts from a paper read before the Society for Cultural Relations with the U.S.S.R. by Mr. Clough Williams-Ellis, who recently made a tour of the Soviet States. In attempting to comment upon Mr. Williams-Ellis's paper we confess that we have not visited the Soviet States. And yet we cannot entirely share his unbounding enthusiasm. By his own statements here, Russian planning "adheres to a grid plan already somewhat discredited by advanced town-planners"; there is "excessive regimentation" and "too little recognition of local ground features and contours." Russian architecture, as he told us at the Architectural Association on November 23, "has all the fashionable tricks and is designed to get a modish up-to-date exterior." He went on to say that the "trouble with functionalism in Russia is that such a lot of things do not function." Granting, however, that a tremendous enthusiasm does exist in the new Russia, we may hint that this zeal may be misplaced because it aims at regimentation, the suppression of the individual, and the Soviet rulers' first step has been to attempt, with some success, the destruction of tradition. We read last week of the blowing up of the Cathedral of the Redeemer in Moscow. If we cannot altogether fall in with Mr. Clough Williams-Ellis's enthusiasm, it must be that were England faced with a choice between speed and slowness in development, we should prefer the latter quality to submitting to a *regime* one of whose first acts would be the blowing of a Cathedral sky high.

Contractors as Architects. A correspondent writes:—"At a meeting of the Torquay Town Council last week the Entertainments Committee was authorised to obtain sketch plans, designs and prices from firms specialising in such structures for the provision of a glass and iron building in the Princess Gardens for the purpose of a band enclosure. It was also suggested that a "vita" lounge or sun lounge should also be erected in front of the Pavilion Café, and that the firm supplying designs for the band enclosure might also submit designs for that." If this report is accurate, we trust that the Council in question will reconsider the question. Not only is it possible that the architectural amenities of that attractive town may suffer, but we should have thought that the dangers of appointing a single party both as contractor and architect were fairly obvious.

The A.A. Pantomime. A long performance, but one of the most vivacious and up-to-date, the pantomime of the A.A. for 1931 consisted of a series of some twenty "sketches" on architectural and kindred matters, interspersed with songs and words suitable for the occasion. It was all very amusing and laughable, Special mention may be made of the skit entitled "Erechtheion, or Little by Little," introducing, as they say on the playbills, American tourists in typical American clothes, consisting of a parson, his wife, and students, and the usual misinformed (though well acted) guide. An amusing dialogue ensues between the parson. his wife, and the guide, during which the students are busily "measuring up" "Architecture and all that." A humorous lecture on the progress of modern bank architecture with the customary inaccuracy of architects' names, and confusion of slides showing "The Brothers Adam"; a skit spoken in darkness, finishing with sudden lighting, showing thieves removing Adam chimneypieces (recently stolen from Bedford Square), are other sketches of an amusing character. We congratulate all connected with the production.

GENERAL NEWS

The Bourse, Lille, France.

We illustrate as our frontispiece a measured drawing, by Mr. W. H. Cowlishaw, of the Bourse at Lille, a building which survived the devastation of the war. It forms part of a portfolio of 70 examples, drawn from buildings covering a period of 300 years, which Mr. Cowlishaw proposes at a later date to publish in complete form, probably by subscription.

London Building Act.

The Metropolitan Borough S.J.C. have forwarded to the London County Council's Advisory Committee, which is dealing with proposals for amending the London Building Act, 1930, certain observations, the chief of which is that in their view district surveyors and their duties should be transferred from the L.C.C. to the Metropolitan borough councils. A summary of the proposal will appear in our next issue.

Roof Fire at Bank of England.

Fire broke out on Tuesday night in an electric crane on the roof of the Bank of England, and caused considerable damage before it was extinguished. For some time the fire burned fiercely, and some of the scaffolding, which is being used in connection with the rebuilding operations, caught alight. There seemed a danger that some of the woodwork might collapse and set fire to the Bank itself, but the firemen were successful in preventing this.

International Association for Bridge and Structural Engineering.

With regard to the notes on this Association which appeared in our issue for November 20, we are asked by the Secretary of the Institution of Structural Engineers to state that the delegates for Great Britain are not as given, but Dr. H. Gough, of the National Physical Laboratory, and Dr. R. E. Stradling, of the Building Research Station. Inquiries should be addressed to the Hon. Secretary, British Advisory Committee, 10, Upper Belgrave-street, S.W.1, as it is the intention of the British Advisory Committee to invite interested people in Great Britain to subscribe to the International Association through the London headquarters.

Christmas Lectures for Boys and Girls.

The fifth series of informal talks on architecture to boys and girls will be given at the R.I.B.A. during the Christmas holidays. At the invitation of the Council of the R.I.B.A. Mr. E. R. Jarrett, A.R.I.B.A., will give the talks, which will be illustrated by lantern slides, and he has chosen as his subject "Houses and Homes." (1) Homes of the Ancients. (2) Mediæval and Renaissance Homes. (3) Homes of the Moderns. The lectures will be given in the R.I.B.A. meeting room at 9, Conduit-street, Regent-street, W.1, on the following dates:—Monday, December 28; Wednesday, December 30; Friday, January 1, all at 3.30 p.m. Tickets for any or all of the lectures may be obtained from the Secretary of the R.I.B.A., 9, Conduit-street, London, W.1. The tickets are free. Owing to the limited seating space of the hall it is hoped that application will not be made for more tickets than can be used.

The Architects' Register.

On January 1 the Architects' Registration Act, passed into law this year, becomes operative, and in accordance with a provision contained in the first schedule, the Home Secretary has appointed the following committee to determine the representation to be accorded to the various architectural societies on the Registration Council (the controlling body):—Mr. C. A. Aish, Major G. B. J. Athoe, Major H. Barnes, Mr. H. W. Crickmay, Mr. S. P. Dale, Mr. L. A. F. Ireland, Mr. W. G. Percy, Mr. A. Randall Wells, and Mr. F. R. Yerbury. The first meeting of the committee was held last Tuesday at the Home Office. For the purpose of the first constitution of the Council the Home Secretary is required under the first paragraph of the First Schedule to appoint as members of the Council five persons who are in practice as architects but are not architect members of any of the architects' associations. In pursuance of this provision the Home Secretary has appointed the following persons:—Clifford A. Aish, J. N. Comper, Harry William Crickmay, W. Hector Mackenzie, A. Randall Wells.

Irish National War Memorial.

In a communication to the Irish National War Memorial Committee, President Cosgrave gives the following outline of a proposed scheme:—"There is on the south bank of the River Liffey, sloping from the bed of the river, an undeveloped site which could be converted into a public park. It is in full view from the Magazine Hill and from the Corkscrew-road in the park, the river lying in between. Proper approaches could be constructed and the site levelled and laid out in pleasant walks with such gardening effects as the funds available would permit. The park would be a public one, but ex-Service men would have the privilege of its use on one or two days in the year in connection with the annual memorial ceremony. The Government would be prepared to consider the granting of the site for this purpose, and the expenditure by the State of a substantial sum of money to augment the funds in the hands of the memorial committee for the laying out of the park and for its maintenance." Plans have been prepared by Sir Edwin Lutyens, R.A.

"THE BUILDER" DEBATE

XLVI.—ASSESSORS' POWERS IN ARCHITECTURAL COMPETITIONS.

SIR,—"Negative" has my support in resisting lay interference in the assessing of competitions. It would be a deplorable thing if the last word in such matters should rest with one who had no technical knowledge of the subject, and in what way that would improve the lot of the architect it is difficult to imagine. It would be interesting to learn of any actual instances in which the promoters of a competition have had any real grievance against the award of the assessor. "Positive" writes as though he had in mind actual instances of this unfortunate state of affairs, and naturally he can hardly quote the actual occasions. It would rather clear the air, however, if he would say definitely whether his case has been inspired by an instance or instances.

On the other hand, I should like to say, as competitor (generally unsuccessful), that of the many in which the award has been against me I have never felt any hardship, or that the winner was not better than myself. If a layman had the judging it might be a very different thing. COMPETITOR.

COMPETITION NEWS

The Carlisle Prison Site.

Carlisle City Council is considering the future of the prison site, one of the most important sites awaiting development. All the buildings have been demolished, but the utilisation of the site has proved a difficult problem. The last proposal was that the municipality should erect shops and offices on the site at a cost of £120,000, subject to an adequate grant being obtained from the Unployment Grants Committee, and it will be remembered that in 1930 designs in competition were invited for a façade, the award being made to Mr. T. G. Richards. Now the General Purposes Committee has decided to recommend the Corporation to offer the site for sale by public auction.

Liverpool Orphanage.

Mr. A. H. Moberly, F.R.I.B.A., the assessor in this competition, has made his award as follows:—

1st (premium £200): Messrs. Barnish, Silcock & Thearle, F. & A.A.R.I.B.A., 58, Rodney-street, Liverpool.

2nd (premium £100): Messrs. Willink & Dod, F.R.I.B.A., Cunard Building, Liverpool.

3rd (premium £50): Messrs. Briggs & Thornely, F.R.I.B.A., Royal Liver Building, Liverpool.

A Farmhouse, near Swanage.

MR. P. MORLEY HORDER, Architect for Reconstruction. (*See page* 999.)

CORRESPONDENCE

[While we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

Refrigeration in the Home.

SIR,—We note that the Minister of Health, in the House of Commons, informed Mr. Roland Robinson that he had no authority to make it a condition of any future subsidy that refrigerators should be installed in working-class flats, and that he doubted whether it would be justifiable or practicable.

As the architects of a large number of flat buildings, we have installed refrigeration in recent years in flats let at rents varying from £90 to £900 per annum, and regard refrigeration of some kind as a *sine qua non* of a modern building, although its installation may still be difficult owing to the cost of a good refrigerating unit.

Refrigeration is so extremely advantageous in a widely different number of ways that we think it desirable that the public should realise its advantages. We have found them to be as follows :—

1. It has been possible to economise in space previously occupied by larder accommodation.
2. The careful mother finds great satisfaction in the certainty that milk and other articles of diet and invalids' and children's food can be entirely free from risk of contamination.
3. Food in the house at week-ends need no longer be thrown away if a country visit is contemplated, and is safely preserved from Friday until Monday.
4. In summer many cold dishes can be brought to the table in extremely appetising and attractive condition, and the lukewarm state of food which is objectionable to many people is entirely eliminated.

We think it would be of the greatest advantage if opinions could be obtained on food preservation from eminent authorities of medicine and hygiene, and it would be a public service if you could quote authoritatively from these sources for the benefit of all those who are interested in hygiene and housing in its highest sense.

T. P. BENNETT
(T. P. Bennett and Son).

Architects and Town-Planning Committees.

SIR,—Information received by me from members of this Association reveals what can only be characterised as a grave abuse in connection with local town-planning committees. Clients of one of our members have informed him that they "much regret that they must employ architects serving on the committee in order that no objection or any delay should arise in their building proposals."

I suggest that legislation on the subject should exclude all practising architects from the panel of local town-planning committees or that each architect practising in the area concerned should be allowed to serve on the committee for a quarterly or half-yearly term. I have evidence that practising architects so serving are stating the fact on their name-plates and note-headings.

One of our members has received a visit from an architect practising in a neighbouring area who is serving on its town-planning committee offering "suggestions"—a course to which there is an obvious objection.

G. B. J. ATHOE,
Secretary, Incorporated Association of Architects and Surveyors.

The "Happy Valley," Llandudno.

Lord Mostyn's offer to present the whole western slope of "Happy Valley"—a beauty spot at Llandudno—has been accepted on behalf of the Town Council. When the land comprising the western slope is made over, the whole of "Happy Valley" will be the property of the town.

ARCHITECTURAL ASSOCIATION

DR. RAYMOND UNWIN, Technical Advisor to the Greater London Regional Planning Committee and President of the Royal Institute of British Architects, in delivering the last of a series of five public lectures organised by the Architectural Association at 34-36, Bedford-square, W.C.1, recently, said that it was necessary to realise the change in direction from which town planning was coming to be approached. The change from purely casual development of towns, conditioned by the limited possibilities of numerous small estates and the short-sighted and interested outlook of each owner, to a planned and orderly growth had been slow; but, like crystallisation, once started it had spread through the whole medium. Commencing in this country from the desire to improve housing conditions and the surroundings of the people's dwellings, it spread first to the lands likely to be developed immediately around the town, then to wider regions to which the influence of the town might penetrate; finally to counties or groups of counties, as recognised in the title of the "Town and Country Planning Bill," which passed the Committee stage in the last Parliament, and which there was every reason to hope would be passed as an Act in the next session. The Bill would give the powers necessary to make regional planning more effective, and to allow planning schemes to be prepared for the built-up areas of towns, now generally excluded. The extension of planning powers to all land would at once make possible the approach from the opposite direction, which was obviously the right one. Instead of working outwards from the detail, the planner would work inwards from the wider problems of distribution and the main framework of planning; and would only get down to details when those more important and determining factors were settled.

The second point which must be realised was that modern motor transport had revolutionised conditions both in the town and in the country; and that a new technique of planning was required, both to take advantage of the new possibilities offered for better distribution of population and industry, and to avoid the serious dangers arising from the conflict which had arisen on our roads and in our streets between their functions; those were for giving access to frontage buildings, whether shops or residences on the one hand, and for serving as rapid transit lines or *quasi* railways on the other. The terrible toll of life and injury on the roads and streets today testified to the intensity of this conflict between two inconsistent uses. People's cars could not stop at their houses or shop doors because of the obstruction to the rapid transit vehicles; the cars that needed to get quickly along could only crawl in places because of the multitude of stopping, turning and crossing vehicles and pedestrians. A similar conflict of use had been allowed to grow up on the main country highways, without justification or economic reason, and on the new arterial roads. It must be recognised that roads carrying streams of vehicles running at 30 to 60 miles per hour were unfitted to be used for giving access to frontage development; that such roads were too expensive to allow their prime use as highways to be sacrificed to the subordinate use of service roads to buildings. Several interesting examples of new methods of development to meet the needs of the motor age were being worked out in America; and it was clear that a new technique of planning roads both in town and country was urgently called for.

The third fundamental change was the method of town growth, on which town and regional planners were agreed; it called for the control of the continuous casual accretions round the fringe of the built-up areas of towns; a form of growth which produced increasing constriction, deprived the central functions and areas of any opportunity for natural expansion, and pushed the open land to which the inhabitants needed access for health and recreation further and further away as the building round the fringe extended. In place of that continuous spreading outward, there should be a grouping of new development into compact units, as self-contained and self-sufficing as possible, to each of which there should be reserved its adequate quota of open land for games, recreation, etc. Planning would then begin by distributing the units of new urban or suburban development as a well-designed pattern of building units carefully distributed on a green background of open land. Having secured these main dispositions of building development units and open space, and solved the problem of separating the through-traffic routes from the service roads, the planner, whether in the centre, the outskirts, or in the country, could approach the detail planning of the areas allocated on lines appropriate according to whether they were intended for industrial, commercial, residential, recreational or cultural use.

Until there were available rational plans on these lines, based on the requirements of present-day life and modern traffic facilities, we should go on increasing the confusion and the difficulty, and making costly blunders through dealing with problems in isolation. With such plans the detail designing of each area could be undertaken to adapt it to its particular purpose, to reduce useless traffic by placing the parts in suitable relations to one another, and to develop the amenities which the sites might afford. Upon such a plan there might arise buildings suitably assorted and beautifully grouped and designed, so that something of the dignity and charm of old towns might be recovered.

REGISTRATION :

COMPLIMENTARY DINNER.

Colonel T. C. R. Moore, M.P. for Ayr burghs, was entertained by Ayrshire architects at a dinner given in the Western House, Ayr, on December 12, in recognition of his work on the Architects' Registration Act in Parliament. In the absence of Mr. James A. Morris, Mr. William Cowie presided. Colonel Moore was accompanied by Mrs. Moore, and among others present were the Marchioness of Ailsa, Captain J. O. MacAndrew, M.P. for South Ayrshire; Mr. John Watson, president of the Royal Incorporation of Architects in Scotland; Mr. John Keppie, chairman of Glasgow School of Art; and Mr. George H. Boswell, president of the Glasgow Chapter of the Royal Incorporation of Architects in Scotland. Gifts presented to Colonel Moore consisted of a cigarette box made of wood from the foundation cradles of the Auld Brig of Ayr, lined with wood from the only tree grown on the abutments of the Auld Brig O' Doon, and a match holder made from a fragment of one of the oldest stones of the Brig of Ayr.

In proposing Colonel Moore's health and presenting him with the gifts, the Chairman said the Act sought ultimately to ensure a guarantee that all architects would be men of reasonable knowledge, culture and intelligence. For that architects and the general public were alike indebted to Colonel Moore, whose pilotage of the Bill through Parliament had involved seven months of strenuous and unremitting labour.

Colonel Moore, replying, said it would have seemed more fitting and proper that the Royal Institute of British Architects, with all its high traditions and record of service to the community, should have been entrusted with the task and responsibility of registration, but the House of Commons, in its wisdom, had ruled it otherwise, and the R.I.B.A. had loyally accepted that decision and were determined to lend all the weight of their authority and experience to the new body.

The toast of "Architecture" was proposed by Lady Ailsa, Mr. John Watson responding, and Mr. John Keppie replied to the toast of "The Guests," proposed by the Chairman.

STAINED GLASS AND ARCHITECTURE.

THIS was the title of a paper delivered at the Royal Institute of British Architects on Monday night by Mr. F. C. Eden, M.A., F.S.A., F.R.I.B.A., the President, Dr. Raymond Unwin, being in the chair.

An architectural critic of some repute, commenced the speaker, once made this curious, if reluctant, admission: "I am forced to say that the window of dyed glass is the most perfect art-form known." With which dictum, said the lecturer, he entirely disagreed, if by "perfect" he meant complete, self-contained, independent of externals. By an odd inversion we had come to regard a frame as something designed to set off a picture to advantage. However true that might be of the comparatively trivial and evanescent easel picture, the nobler forms of art such as mosaic and fresco had come into being for the very purpose of adorning their frames; but the frame, which in the one case might be just a gilded slat, in the other was no less than architecture itself. And so on its own lower level with stained glass. It was only in strict and loyal subordination to architecture that it had any right to exist. It was quite accurately an architectural art.

After giving some description of the stages through which a stained-glass window had to pass before it reaches its place in a church, the lecturer said that he thought that there was a notion still held in some quarters that the same man, if he did not actually manufacture the glass, should at all events prepare the design, draw the cartoon and cut-line, cut the glass, apply the paint—perhaps he might be let off the firing—and lead the pieces together. He did not know how such a fallacy came about, but it was not the method used when the art was at its zenith. To start with, glass-making and glass-painting were entirely different crafts. Then one made the design, another the cartoons, and yet another executed the painting. In the contract made in 1447 with John Prudde for the windows in the Beauchamp Chapel allusion was made to "patterns on paper afterwards to be newly traced and pictured by another painter." In recent years the propriety of the procedure had been questioned, but if we might judge from the magnificent results produced when that method was in vogue there could be no doubt that it was the right one to follow: co-operation and collaboration certainly, but not confusion of the artist and the workman.

In the early period when the glass was used in very small fragments the arrangement of the leadwork was constrained to follow the design. But as the technique improved, and especially when white glass began to predominate, the leads had to be so schemed as not to confuse the drawing or compete with the fine painted line, but just to add emphasis when that could be done with advantage. A skilful cartoonist would always bear in mind the limitations of the glazier, but even so the preparation of the cut-line, on which the leading was finally determined, involved careful judgment. In white draperies, for instance, it was often inadvisable to allow the leads to follow the folds; if a lead were taken boldly across them in a slightly curved line, it was strange how little it obtruded itself in the finished work, whereas a lead running down a fold, except in a large-scale figure, might give an unduly emphatic line out of scale with the painted shading.

The introduction of modern glass into old churches had been the subject of controversy. Mr. Herbert Read felt strongly on the matter. "In all directions," he writes,* "there is a relapse into a servile and lifeless imitation of mediæval mannerisms, due to a natural disregard for those self-denying ordinances which Morris observed. It seems that only the complete filling of every window in every old church will ever terminate this atrocious vandalism." The self-denying ordinance alluded to was the rule which Morris made, after one or two experiments, not to supply stained glass for any church which could be considered a monument of mediæval art. He thought, said the speaker, that a visit to the Cathedral at Oxford might in part explain that reluctance. For some obscure æsthetic reason—its self-consciousness, perhaps—glass of the Burne-Jones type with which Morris was associated created an acute disharmony in an ancient church. Seeing that both designer and executant might be classed as mediævalists, that was somewhat curious. The 17th-century glass of the Van Lingeus in the same church, for all its theoretical errors, its enamels, its smokiness and its pictorial ideals, struck no note of discord whatever.

Well, what was to be done? People would give windows, however much one might endeavour to divert their gifts into other channels. Personally, he would be glad if modern glass were confined to windows over altars and at the west end of churches. While he had no scruple in substituting new glass, which did at least admit light for the heavy or glaring shop-work of the last century, in the hope that one's own attempts might in course of time give way to something better, he did deprecate the displacement of clear glass through which one could enjoy sky and trees, and his advice was usually to leave aisle windows alone. The designer of a new church should always exercise control over the glass, in order to ensure an architectonic basis together with consistency and continuity of treatment. He should insist upon a coherent scheme being drawn up, to fix the subject for each window, and avoid the haphazard, unrelated effect produced when each donor was allowed to choose his own subject. He should select a glass-painter in sympathy with his work to carry out the whole, and should exercise a general supervision over the design. If a good scheme was prepared to start with, donors would be found willing to fall in with it, and it would be possible to veto unsuitable subjects. In his judgment, anything that lent itself to sentimental treatment, such as the Good Shepherd, the Light of the World, was unsuitable: Sentimentality and its ugly sister Mawkishness were the bane of religious art. But surely the most incongruous window ever inserted in a church was the Sports window in the Cathedral of St. John, N.Y. It included medallion subjects, set in imitated 13th-century ornament, representing, among others, polo, tennis, cycling, football and horse-racing. One light showed two men in plus-fours setting out along a country road to the links. If modern realistic subjects must be introduced, the least offensive way to do so was as quite small medallions in grisaille—i.e., white and yellow stain only.

It was sometimes forgotten that the prime function of a window was to admit light. Whatever might be suited to the tropics, where "the worst of your foes was the sun overhead," in this climate the cry must ever be "Light, more light." So it was throughout the Middle Ages—those ages, not of sentiment, but of common sense. The solemn, gorgeous colouring of the thirteenth century gradually gave place to the delicate, silvery tints of the fifteenth, with its predominance of white glass, while at the same time the window openings grew larger and larger, till the wall became a mere pierced screen for the display of glass. Mason and glass-painter played into one another's hands, so that it might almost seem as if stained glass were the formative element in the evolution of Gothic architecture. Churches in this country needed all the daylight possible. Nothing was so depressing as a town church the windows of which had been so obscured by semi-opaque glass that artificial light had to be used at all hours of the day. It was a curious reflection that the culminating point of an art of which colour would seem to be the very *raison d'être* should be marked by this predominance, or rather triumph, of white. One reason perhaps for this gradual development from murk to the full light of day was that stained glass was peculiarly the art of the North, of sunless climes: an art, maybe, of compensation, to redress the balance, to cheat us into cheerfulness. As Marcel Proust had said: "If it be dull without, you may be sure of fair weather in church." However that might be, if one wanted to study glass, one must choose a dull day. Direct sunlight was a hindrance. With sun streaming through them, the windows facing south were too blinding to examine in comfort, while those on the north would receive the light from the wrong side and fade into lifelessness.

Lead glazing was not self-supporting. Apart from wind-pressure a piece measuring a very few feet in area would sag and crack by its own weight. It therefore required extraneous support. The wide lights of the 13th century were fortified by a regular armament of ironwork arranged in circles, lozenges and so forth, to define the shape of the medallions composing the design. With the introduction of stone mullions, whereby the width of the lights was reduced, say, from 6 ft. to 2 ft. or less, the patterned shapes of the earlier irons were simplified to a rectangular grid of standards and saddle-bars. It must not be supposed that those bars hampered the designer: they really propped the artist as much as they did the material, by compelling him to take the sections into which the surface was divided as units of his design, which was thereby forced on to a geometrical basis. In new churches irons should always be provided, but it was well to tip them with copper where they entered the stone.

During the last thirty years or so English glass painting had produced two new schools, diametrically opposed in method and ideals. He would call them the Thick and Thin schools. The one took as its model English 15th-century glass, and aimed at lightness of effect produced by abundant use of white glass combined with slight and delicate painting and a restricted palette. The other, the Thick school—if it might be said to have taken any traditional style as its point of departure, for it was really quite styleless—was to some extent based upon the mosaic method of the 13th century. It was obvious that the whole art was based on the craft of the glazier, and it was historically true that as the painter pushed his way more and more to the front the glazier was thrust more and more into the background, till the art sank to its lowest ebb in the west window of New College Chapel. Here the best that a great colourist like Sir Joshua Reynolds could do was to emit a sort of bituminous fog, while the leading which it was sought to avoid revenged itself by obtruding a rectangular grille across the murky and peeling pictures. It was not surprising that such an example of the peril of shirking the limitation imposed by the leads should have driven some designers to the opposite extreme. Insistence on glazing for its own sake, and not merely as a technical necessity and wholesome restraint upon the painter's vagaries, was obvious in the work of the Thick school. The Thin school arose in reaction against the overpainting, excessive modelling and pictorial tendencies observable in some contemporary work, which it aimed at correcting by reversion to the fair colouring and delicate painting characteristic of the later mediæval work. Much of the glass it had produced, while noteworthy for careful design, always on an

*English Stained Glass. Herbert Read, p. 225.

architectonic basis, had likewise suffered from exaggeration. Reaction against realistic modelling of form had resulted in the thinness and flatness of a transparency, with an appearance of timidity which the irreverent might call washiness. For old churches he was inclined to prefer work of the Thin school. Its very lack of push and individualism, even its occasional vapidity, were less likely to disturb the serenity and repose that should characterise every church. What the Thick school gained in freshness and emphasis it was apt to lose in refinement. Its work was too personal ever to fade into the quiet atmosphere of an ancient building. With a ferro-concrete and thoroughly up-to-date church he felt it would be perfectly congruous.

The risks which the two schools had to guard against were insipidity in the one case, violence in the other. Who should decide where the greater danger lay? The only advice he could give was the classic advice of common sense, μηδὲν ἄγαν, which might be translated, "never overdo it."

Discussion.

Sir Charles Peers, C.B.E., Chief Inspector of Ancient Monuments, in moving a vote of thanks to the lecturer, said that Mr. Eden himself had been responsible for some of the best modern glass that had been done. There was no one at the present time who had more fully the knack—if he might use the word—of fitting his glass to the surroundings. An important point was to remember that the builders, furnishers and decorators of the ancient buildings conceived the whole building as a medium for colour, for no mediæval craftsman considered his work completed if left uncoloured. The whole question of the history of coloured glass was dependent on the kind of glass that the windows were made to hold. And whereas the ancient craftsmen made glass without thought of what had gone before, we to-day had to conceive of modern glass in the same way. The first thing one thought of on seeing a fine example of stained glass was: "What a beautiful ornament!" The story told therein came second, though it was important that no ornament should be without its reason.

The vote of thanks was seconded by Mr Walter Tapper, F.S.A., who referred to the question of putting new glass into old churches, and gave as his opinion that it all depended upon the quality of the glass. The question that really concerned him was whether we could get modern glass as good as the old. If we could get stained glass equal to that at Chartres or York, it did not matter whether the "thick" or the "thin" school, as Mr. Eden had named them, had produced it.

Dr. J. W. Mackail spok eont he doctrine and practice of William Morris, who started with the notion that if in an old church there was bad glass it should be taken out and replaced, not by old glass—which was a pretence—but by new glass, which should be a thing of joy. Then Morris laid down that he would not put any old stained glass into any church at all. Glass, said the speaker, was but a picture hung on the wall. As to whether stained glass should have anything to tell, he would reserve his judgment and would only say, with Keats, that "Beauty is Truth, Truth Beauty." The spirit behind the work was more important than any story.

Dr. Foxley Norris (Dean of Westminster) said that his only claim to enter the discussion was that he had spent a great deal of his life in Yorkshire, and especially in York Minster; and York Minster proved that English stained glass was the best in the world. He felt that the purpose of stained glass was not for teaching but for enrichment, and the great East Window at York was a fine example. He had known men who were accustomed to come and sit in front of it for an hour simply to look at it. In that window there were 117 subjects, and as no two authorities had ever agreed as to any of them, it seemed to prove that the purpose of the window was not to teach lessons to simple folk. For that reason he ventured to disagree with Mr. Eden that the artist should lay out a scheme of subjects. By all means lay out a scheme of colour or of decoration. He hoped that modern glass would not become commercialised. He had heard of stained glass windows being made and sent to churches by men who had never seen the church.

Mr. H. G. Ibberson said that he had understood the lecturer to say that the man who drew the cartoon should not paint it upon the glass. Was that so? He would also like to ask about the possibility of introducing modern costumes and modern subjects into glass.

Mr. W. D. Caröe, F.S.A., said that Mr. Eden had referred to ironwork, which was as much a part of the window as the glass itself. He heartily agreed, and felt that to "hoof" it out of an old building, as some people did, was a crime.

Mr. William Morris thought that no man should ever attempt to design windows unless he had learnt at the bench the limitations and possibilities of his craft. He also believed that faults in colour and design did not seem as bad as errors in scale. He would like to hurl one shaft at the Dean of Westminster, for, in his opinion, glass painters were not guilty of more examples of stained glass commercialism than were some of the clergy. He had know cases where a vicar had invited a dozen firms to tender, and when asked by one firm if a representative could be sent to see the church had asked "Why? The other firms aren't doing so." He would suggest that every clergyman should have some training in art and as to what they should put in their churches.

Mr. Noel Heaton spoke of the fallacy of the "one-man" job. There never had been a time when all sides of window construction had been done by the same man. Yet it was essential that the man who did the cartoon should also do the painting. It was time we looked upon stained glass as a living art, for to-day we could do all that had been done in the best period of mediæval art, though he would emphasise that to-day there was a danger of the painter running riot in the galaxy of glasses and colours at his disposal. He expressed the hope that people would look upon stained glass as a decoration suitable for other classes of buildings besides churches.

Mr. Leonard Walker said that to succeed in the work it was necessary to learn the language of the material in which one was working. One should try to transport oneself into a world of glass.

Mr. Eden replied briefly to the various points. He did not agree with introducing modern costume into stained glass, because modern costume was so ugly. He agreed with what Mr. Caröe had said about the iron. Mr. Morris's ideas on scale were, of course, perfectly sound. As regards the remarks on the one-man worker, what he meant was not that the cartoon and painting should not be done by the same man, but that the artist should refrain from carrying out the whole window. He cited the case of James Fisher, whose work improved a great deal when he confined himself to cartoons and painting only.

St. Paul's Bridge Scheme.

The St. Paul's Bridge scheme has again been deferred by the City Corporation. The reason for shelving this £5,000,000 plan to bridge the Thames near St. Paul's Cathedral is given by the Bridge House Estates Committee, who have reported to the Corporation that, in the circumstances, it is obvious that expectations in regard to contributions from the Government and the London County Council are unlikely to materialise.

The Heston Airport, from the air. (*See page* 993.)

[The flying ground is at the apex of the "spear-head."]

ROYAL ACADEMY STUDENTSHIPS

Sir William Llewellyn, P.R.A., delivered the annual discourse to the students of the Royal Academy Schools at Burlington House on Thursday, December 10, when scholarships and prizes were awarded. At the Academy, he said, pupils had the privilege of association and comradeship with other students practising different branches of art from their own. Architects, painters, and sculptors should mix freely and discuss together difficult problems of their art, and thus widen their understanding of art as a whole, which might enable them in the future to co-operate intelligently in important schemes of decoration. Each, indeed, should actually practise a little of the other's different art. Only a small part, though an important part, of their education could take place in the schools. Problems of extreme difficulty faced them in these days of great change and intense competition, and it was necessary for them to provide themselves with knowledge in order that they should make decisions with understanding. No one could invent from a barren mind. All the great artists that the world had seen were men of great learning in many ways, and in some cases they had been the intellectual giants of their time. The students should read a great deal and make themselves acquainted with history and the great works of the past. He was glad to see the students, to their great advantage, trying to paint honestly what was before them. That was the only proper way for a student to work, and that method of study should be persisted in till a complete mastery had been gained over the technical difficulties of the craft. They must never cease to practise drawing, for drawing was the real foundation of everything. In many of their sketches, form, composition, colour, and lighting were good, whereas those qualities were sometimes lost in a larger picture. What was composition? It was the art of disposing the component parts of a picture so that each should occupy its proper place and co-operate in the successful building up of the picture as a whole, using means to lead the eye and the mind of the spectator to the principal idea or form. Flow of line, a balance of light and shade, and many other considerations came into this process. It was a systematic "putting together" of a picture.

The following is a list of prizes and the prizewinners :—

Historical Painting.—"Echo and Narcissus"—R.A. Gold Medal and Edward Stott Travelling Studentship (£200), Norman Alexander Clark; Proxime Accessit, Arthur George L. Mackenzie, Diana Beatrix Ll. Pullinger, Leighton Hall Woollatt.

Landscape Painting.—"A Storm"—Turner Gold Medal and Scholarship (£50), Walter Goodin.

Landscape Painting.—"A View on the Thames"—1st Creswick Prize (£25) and Silver Medal, Michael James Mounsey; 2nd Creswick Prize (£10) and Bronze Medal, Edward Charles N. Folkard.

Photo by Mr. John Dower.

Schiphol Airport, Amsterdam.

The station building and control tower.

Design in Monochrome for a Figure Picture.—"Moses and the Shepherds by the Well—Exodus ii, 15-17"—1st Armitage Prize (£30) and Silver Medal, Arnold Ernest G. Pienne; 2nd Armitage Prize (£20) and Bronze Medal, Ernest Henry Batten; 3rd Armitage Prize (£10) and Bronze Medal, Norman Alexander Clark.

Design in Water Colour for the Decoration of a Portion of a Public Building.—"Design for the South Section of the Ceiling of the Library of the Royal Academy"—1st Landseer Prize (£30) and Silver Medal, Diana Beatrix Ll. Pullinger; 2nd Landseer Prize (£10) and Bronze Medal, not awarded.

Composition in Colour.—Prize (£5) and S. J. Solomon Silver Medal—Diana Beatrix Ll. Pullinger.

Cartoon of a Draped Figure.—"An Orator"—Landseer Prize (£25) and Silver Medal, Leighton Hall Woollatt.

Two Paintings of a Figure from the Life.—1st Landseer Prize (£20) and Silver Medal, John Frye Bourne; 2nd Landseer Prize (£10) and Bronze Medal, Agnes Elisabeth Charles; Additional Turner Prize (£5), Walter Goodin.

Portrait Study of a Lady in Evening Dress showing Arms and Hands.—Arthur Hacker Prize (£30) and Silver Medal, Mervyn Laurence Peake; Additional Turner Prizes (£5), Vera Evelyn Brookman, Agnes Elisabeth Charles.

Two Paintings of a Head from the Life.—Arthur Hacker Prize (£20) and Silver Medal, Vera Evelyn Brookman; Additional Turner Prizes (£5), Agnes Elisabeth Charles, Walter Goodin, Dorothy Audrey C. Mais.

Set of Four Drawings of a Figure from the Life.—1st Prize (£10) and Silver Medal, Enid Annie Abrahams; 2nd Prize (£5) and Bronze Medal, Diana Beatrix Ll. Pullinger.

Set of Three Drawings of a Head from the Life.—Prize £5, John Frye Bourne.

A Painting from a Cast.—1st Landseer Prize (£10), Ian Robert Fleming-Williams; 2nd Landseer Prize (£5), Agnes Hilda Swift.

Drawing from the Antique.—Prize (£5) and Silver Medal, not awarded.

Pencil Study of a Landscape Foreground.—Duff Greet Prize (£10) and Silver Medal, George Hulme.

Composition in Sculpture.—"A Group of Two Figures in the Round, half life-size"—R.A. Gold Medal and Edward Stott Travelling Studentship (£200), Sheila Esther Khan.

Model of a Design.—"Samson and Delilah"—1st Landseer Prize (£30) and Silver Medal, Marjorie Meggitt; 2nd Landseer Prize (£10) and Bronze Medal, Ramachandra Panduranay Kamat.

Two Models of Busts from the Life.—1st Landseer Prize (£20) and Silver Medal, Erica Mildred White; 2nd Landseer Prize (£10) and Bronze Medal, Frances Margaret Bruce.

Model from the Antique.—Landseer Prize (£10) and Silver Medal, Sheila Esther Khan.

Design in Relief, containing Figure and Ornament.—"Design for a Lunette over a Door 3 ft. wide"—Prize (£10) and Silver Medal, no competition.

Set of Three Models of a Figure from the Life.—1st Landseer Prize (£30) and Silver Medal, Ramachandra Panduranay Kamat; 2nd Landseer Prize (£20) and Bronze Medal, Erica Mildred White.*

* Ineligible through having received the same prize before.

Design in Architecture.—A London Club-house—R.A. Gold Medal and Edward Stott Travelling Studentship (£200), William Frederick Howard.

Set of Measured Architectural Drawings.—"The Screen of the Admiralty in Whitehall"—1st Prize (£10) and Silver Medal, Ellis Jerden Cook; 2nd Prize (£5) and Bronze Medal, not awarded.

An Architectural Design.—Landseer Prize (£20) and Silver Medal, Eric John Hartland.

An Architectural Design.—1st Prize (£10) and Silver Medal, Herbert James W. Broadwater; 2nd Prize (£5) and Bronze Medal, David Carr.

Model of an Original Composition in Ornament (open only to Students in Architecture).—Prize (£5) and Silver Medal, no competition.

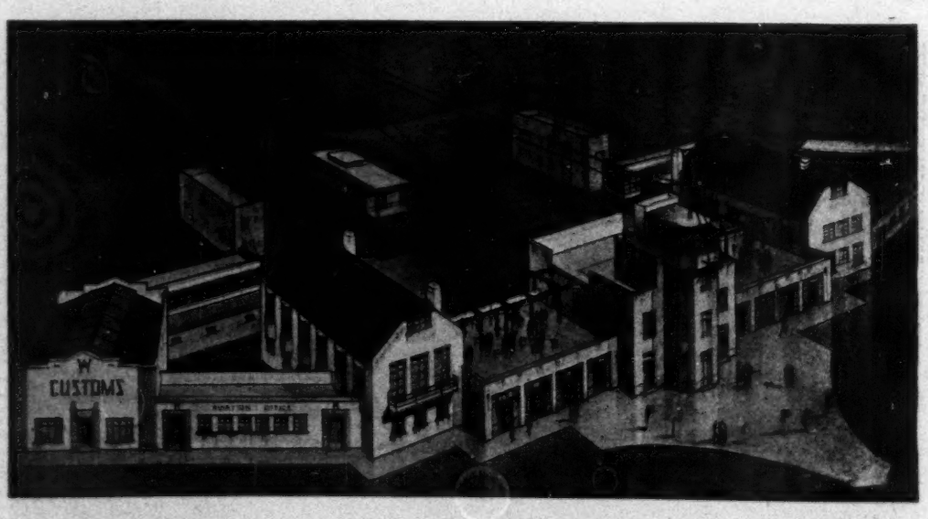
Perspective Drawing in Outline (open to all Students).—"The Orangery, Kensington Gardens"—Landseer Prize (£5) and Silver Medal, no competition.

Landseer Scholarships in Painting and Sculpture, of £40 a year each, tenable for two years, have been awarded—in Painting to Edward D. Eade, William C. Evans and Audrey B. Moore; in Sculpture to Marjorie Meggitt.

John Crompton Scholarships in Painting of £50 each, tenable for one year, have been awarded to Ernest Henry Batten and George Hulme.

A Reunion Dinner.

The annual reunion dinner of the Surveyors' and Auctioneers' Association, Regent-street, Polytechnic (past and present students), will again be held at Pritchard's Restaurant, on Wednesday, January 6, 1932. Full particulars and tickets may be had on application to Mr. E. C. White, 20, Circus-road, N.W.8. Telephone: Primrose 0137.



The Heston Airport: Sketch Design for finished Station Buildings.

[The central, or clubhouse portion, and cottages at back, were designed by Mr. M. L. Austin, A.R.I.B.A. The remaining buildings are by Mr. Graham Dawbarn, M.A., F.R.I.B.A. Mr. Nigel Norman, Chairman of Airwork, the company who own and operate Heston, has throughout been largely responsible for the general planning and layout.]

THE ARCHITECTURE CLUB

CITIES AS AIRPORTS.

THE twentieth dinner of the Architecture Club was held at the Savoy Hotel, W., on Wednesday, December 9, with Mr. R. Holland-Martin, F.S.A., in the chair. Among those present were: Lord Meston, Dr. Hugo Eckener (Commandant Graf *Zeppelin*), Lady Maud Hoare, the Master of Sempill, Dr. Raymond Unwin, Messrs. Joseph Armitage, Percy Bartlett, Gilbert Bayes, Darcy Braddell, Cyril Carter, Arthur J. Davis, G. R. Dawbarn, John Dower, Joseph Emberton, C. W. Glover, Stanley Hamp, Basil Ionides, C. H. James, C. J. Kavanagh, Lt.-Col. H. P. Cart de Lafontaine, Messrs. Oswald Milne, G. L. Pepler, S. C. Ramsey, A A. H. Scott, T. S. Tait, W. Harding Thompson, E. Maxwell Fry, C. Williams-Ellis, G. Grey Wornum, F. R. Yerbury, and J. H. Elder-Duncan (secretary).

Mr. John Dower (hon. sec., R.I.B.A. Aerodromes Committee) showed a number of slides depicting aerodromes in which some measure of design has been observed. He stressed the need for the reservation for aerodromes of large sites all over the country. The development of town-planning legislation made it easy for municipalities to put that into effect. Most of his slides, he said, were of Continental and American air stations; there was only one airport in England, Heston, with an architectural appearance worthy of illustration.

Col. F. C. Shelmerdine (Director of Civil Aviation) emphasised the fact that on the Continent and in America they were far ahead of Great Britain in airport design. But he wished it were possible for Mr. Dower to have shown some of our air stations along the Empire air routes. They were not, perhaps, particularly architectural, but they were serving their purpose well. After giving a short history of British civil air navigation, whose first port was Hounslow, the speaker said that the essence of an airport was quick dealing with passengers and freight as they came in and out, and after that the most important point was the comfort of the passengers. One had to get people accustomed to flying as to every other form of transport. British airports should be improved along the line of speed. The ideal was an aerodrome in the centre of London which could be used by all machines. A shuttle air service between Croydon and the centre of London would not be an improvement from the point of view of speed on the present system of landing passengers at Croydon and transporting them by road to London. There were plenty of places suitable for a central aerodrome, but all sorts of vested interests stood in the way and he saw no likelihood of overcoming them. He did not agree with the view that there was no future for internal air transport in this country. There was a future for it for distances over 200 miles, but there must be aerodromes at suitable places, and nothing was being done round London to that end. The problem of making arrangements for amphibian craft and seaplanes would also have to be considered, for tests had shown that it was not possible to use reservoirs round London or the Thames.

Mr. Nigel Norman (Director, Heston Air Park), who has only recently returned from a flying tour in the United States, where he has been studying aerodrome design, said that as compared with Architecture, Aviation had only just gone on the stage. Those who cultivated her found her very beautiful but not very rich. The relationship that night with Architecture put her, it seemed, in the position of a lovely young girl who had just caught the eye of all the most famous dress designers. That impression was heightened by the fact that flying fashions changed very rapidly. Speaking of the future trend of station design, the speaker mentioned that the United States had no fewer than 1,800 aerodromes. Many were expensive to build, and some companies thought nothing of spending £25,000 on a single hangar. In aerodrome design the trend might be to control passengers much as was now done in railway stations. In the future machines would inevitably be bigger and they would conceivably carry 200 or 300 people each. Many machines would require dealing with at the same time also, and the effect of this would be to cause a different planning from the present type. While in the future it might be possible to establish aerodromes actually in towns, it was not possible at present. But it might be possible to establish cities round airports, for the progress made with autogyros suggested that the problem of landing on and taking off from small spaces would be solved, and then short-distance flying would rank even higher than long-distance flying, because of the volume. In the past, aerodromes had been very unattractive places, and to-day they very badly needed all the assistance that the architect could give to help attract people to fly.

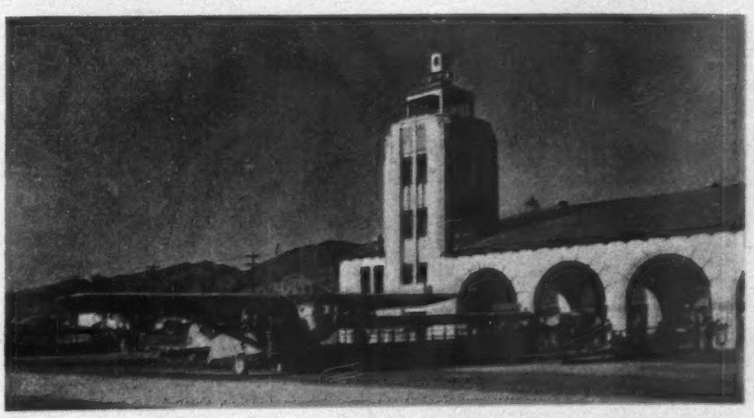
Dr. Raymond Unwin, President, R.I.B.A., said that it was fortunate that town planners were a long-suffering race. Undismayed they had seen their public taking to wheels and running about the country at the speed of express trains. They had evolved a new technique of planning to meet those conditions, though they had not yet persuaded either the authorities or the public to adopt it to any considerable extent. And now they found their people were taking to wings, and again if that angelic habit persisted they would have to evolve another new technique. It was interesting to find how extremely well good planning in accordance with the technique already evolved by town planners would adapt itself to the new conditions. We were all agreed that the continuous spread of masses of consolidated building covering hundreds of square miles was a thoroughly bad system of town growth; and that building development, like other forms of decoration, should be properly designed as a rational pattern suitably arranged on an adequate background of open land. If the central city took somewhat the form of a blunt-nosed star pattern, and the suburbs were first developed in the spaces between the star rays, with adequate belts of open space intervening, and if further development took place in the form of reasonably compact satellite units suitably spaced over the surrounding territory, with due consideration for its natural features, the existing rivers, roads or other means of transport, how well that system would suit flying people. Aerodromes could then be near the heart of the city, and yet there would be open belts over which to fly outwards to distant places or along which to fly from one satellite unit to another. But in the near future we might find that good planning with instinctive foresight would have provided possibilities for much extended private flying. Even without waiting for the vertically rising 'plane, the spaces which in the modern lay-out were very frequently allowed for a couple of tennis courts, or for extra long gardens, could very well provide a run for the type of 'plane which we might imagine would ere long be available, which could rise at a very considerable angle. The advantage of planning urban development on an adequate background of open land intervening between the built-up units could hardly be exaggerated from the aeroplane point of view, for those lanes of green, intervening between the satellite units, would afford ground over which the many 'planes would pass, with the minimum risk.

The Master of Sempill referred to certain advantages, principally of centralisation of passenger and customs services, which came from planning stations in the centre of the flying-ground, as was often done in America. The time might soon arrive when aerodromes would have instead of grass a concrete or tarmac surface, which would add to the advantage of machines, and would be to the comfort of passengers, who to-day had an unpleasant time at aerodromes.

Mr G. L. Pepler (Chief Town Planning Inspector), Chairman of the Aerodromes Committee of the Royal Institute of British Architects) said that the Aerodromes Committee were appointed in 1929 to examine and report on the Architectural Design of Aerodromes. They all now believed that the importance of aviation as a means of transport would steadily increase. Because of this, their thoughts had first turned to the general planning aspect of the problem; the necessity of co-ordination with other means of transport, the need to bring aviation into harmony with the efficient and comfortable functioning of the places it would serve. In placing an aerodrome, the safety and efficiency of aviators, their machines, passengers and goods was of first importance, but it must not be a thing tacked on to a town promiscuously; it must take its proper place in a general plan, and must be designed appropriately and worthily according to its function. The planning aspect of the problem had been covered in the interim report already issued by the Committee, and they were now, with the able assistance of their capable and energetic secretary, Mr. John Dower, turning their attention to questions relating more particularly to the actual design of aerodromes; questions of enormous importance on grounds of safety, efficiency, economy, amenity, and civic dignity.

Mr. C. W. Glover showed some slides of the scheme he has prepared for building an airport* on a site at King's Cross, with the idea of linking up air travel with other forms of transport: train, road, and canal.

* Some details of Mr. Glover's scheme will be given in our next issue.



Grand Central Air Terminal, Los Angeles, U.S.A.

KENNETH FRANZHEIM, Architect, New York.

One of Los Angeles' six airports; note the covered way from the station building to the waiting 'plane.

ILLUSTRATIONS

PLATES.

St. Joseph's, Benwell, Newcastle-on-Tyne.

This church is built in the newly-developed district at the west of Newcastle, in Armstrong-road. It is cruciform in plan, having nave arcade in seven bays, wide aisles for processional purposes, north and south transepts, and sanctuary with apsidal termination having five recessed bays finished in marble and gold mosaic. The style of the building is Romanesque, introducing Byzantine influence in the domes, of which the principal one is that at the crossing. Semi-domes are also arranged over the side chapels in the transepts, and an octagonal dome over the main entrance. These domes are erected in ferro-concrete, and the whole of the building is built in brick with Dutch facings. With regard to the internal surface of the semi-domes over the side chapels, these are executed, for decorative purposes, with coloured glass, bedded in the concrete, giving a mosaic effect.

Messrs. Stienlet and Maxwell, L. & F.R.I.B.A., of Newcastle-on-Tyne, are the architects.

Watford Maternity Home.

This building, for the Hertfordshire County Council, was opened on December 3 by the Marchioness of Salisbury. It is not only a maternity home, but also a training centre for nurses. Therefore there is a great deal of accommodation provided in it which would not be provided were not the training of nurses a very important part of the work to be done in it. For example there are 22 single-bedded bedrooms (exclusive of the matron's bedroom); also 9 baths in the building (exclusive of the 4 baths for babies), though one of these baths is in that part of the building which is devoted to the reception of patients, and therefore where it will be chiefly used by patients on their first coming to the "home."

The site is circumscribed for a building of this size. But, in spite of this, interest attaches to the fact that it has been possible to give the two main wards the ideal aspects. They lie with their major axis north and south, and therefore have sun in them at any time of the day on any day of the year on which the sun shines.

A south aspect has been given to all private wards, to both nurseries, and to the nurses' and sisters' sitting-rooms, to eight of the nurses' bedrooms and to one window of the staff dining-room, and only four bedrooms have north aspects, the north side of the building being mainly occupied by the "labour" and "delivery" rooms, the rooms for which a north aspect is essential. As it is inevitable that a few first-floor rooms should face north, these are bedrooms for nurses in training, and therefore will be little occupied except at night.

One interest attaching to this building arises from the disposition of the beds in the main wards. The doctors came to the conclusion that (economy and everything else considered) the four-bedded ward was the ideal. They therefore cast about in their minds for a means by which they could get three things: (1) The advantages of the four-bedded ward together with those of the public ward; (2) a much greater proportion of the external walls of a ward occupied by windows, that patients might profit by lying among brighter and more cheerful surroundings, and (when the windows were all fully opened) might lie in beds so placed that they could see out of the windows. So the doctors devised a large ward divided by glazed screens into compartments, each containing four beds. In this way they obtained units of four beds occupied by patients dissociated from other patients in the ward, while at the same time they obtained the advantages of the large ward due to the whole ward being under observation at all times through the screens in it being glazed. Incidentally, this arrangement of beds gives rise to very considerable economy in capital cost, as it works perfectly with considerably fewer beds to a given floor area than is necessitated by the old arrangement of beds.

Following is a list of the firms responsible for carrying out the work: Turner and Payne, North Finchley, general contractors; Siegwart Fireproof Floor Co., Ltd., floors; Terradura, Manchester, floor finishings, jointless floors and terrazzo; Crittall Manufacturing Co., windows and glazed screens; Tucker and Son, Loughborough, roofing tiles; James Combe and Son, Ltd., Welwyn Garden City, heating and hot water supply; J. W. Russell, Ltd., Watford, electric installation and bells; Shanks and Co., Ltd., sanitary goods; James Gibbons, Ltd., door furniture and ironmongery; Benham and Sons, Ltd., gas cooking apparatus and lift; Engert and Rolfe, Ltd., asphalt work; Clement French and Sons, Stevenage, wrot.-iron gates; Croft Granite, brick and Concrete Co., Ltd., near Leicester, cast stone.

Mr. Barry Parker, F.R.I.B.A., is the architect.

House and Reconstructed Farmhouse, Swanage.

The house, "Scar Bank," is a stone semi-bungalow, and has been built at Swanage. Only one large room is on the upper floor, in order to get views of the sea not seen from below. It is proposed in the future to extend the house and also to form an enclosed wall garden, as shown in the unhatched portion of the plan. The stone was picked up on the site and built in random, as all houses in a district where stone is to be obtained in this way should be. The architect was Mr. P. Morley Horder, who also reconstructed the farmhouse nearby, illustrated on pages 988, 999 and 1000.

"Gaumont Palace," Plymouth.

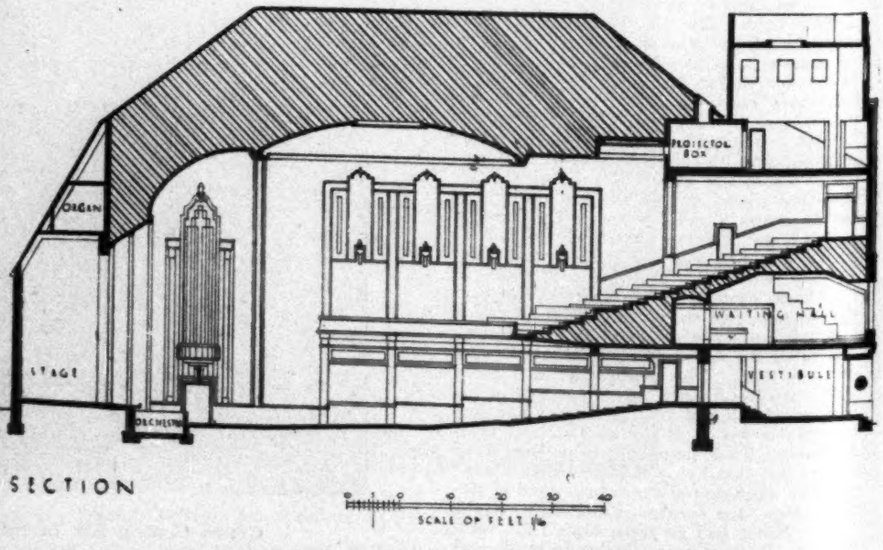
This cinema is situated in Union-street on a site recently occupied by the Andrews Picture House and adjoining properties which have been demolished to make room for the new building. The seating capacity is over 2,300, the stalls providing accommodation for over 1,500, and the balcony 800. Ample crush hall accommodation and covered queue spaces are provided and there are numerous exits from all parts of the auditorium. The cinema is a steel-framed, fire-resisting structure designed and equipped in accordance with the most modern practice; the whole being carried out from the designs and under the superintendence of Mr. W. H. Watkins, F.R.I.B.A., Bristol, who is also architect for the company's new cinema theatres at Bristol, Coventry, Exeter and Barnstaple.

The main elevation to Union-street is over 100 ft. wide and is essentially modern in conception and executed in stone and warm-toned sand-faced bricks. The decorative treatment of the interior is, like the elevations, definitely modern in style and decoration. The proscenium frame is the focal point of the whole building; tones of primrose, jade green and tangerine form surfaces suitable for the play of coloured lighting, the source of which is skilfully concealed. Another point of interest is a large dome, 65 ft. in diameter, blended in tones of coral pink to vieux rose with a contrasting note of jade green and gold. Crowning this feature is a heavily modelled grille through which the vitiated air is extracted.

On the mezzanine floor above the entrance vestibule is a balcony lounge 80 ft. long and 40 ft. wide. The lounge and corridors have been treated "en suite" with the rest of the building; here again a restrained scheme of modelled plaster has been enriched by the addition of subtle tones of tangerine, lilac and jade green, while the walls are coated with gold bronze.

The stage, which had a floor area of over 1,200 sq. ft., is fitted up with all the latest equipment of every description, has several dressing-rooms adjacent, and is suitable for the production of all forms of entertainment. The heating and ventilation is carried out on the Plenum system, the plant occupying extensive basements. Purified and warmed air is delivered through a main duct to various points through grilles into the auditorium and crush hall, in such a manner as to prevent any suggestion of draught even to people sitting alongside the grilles.

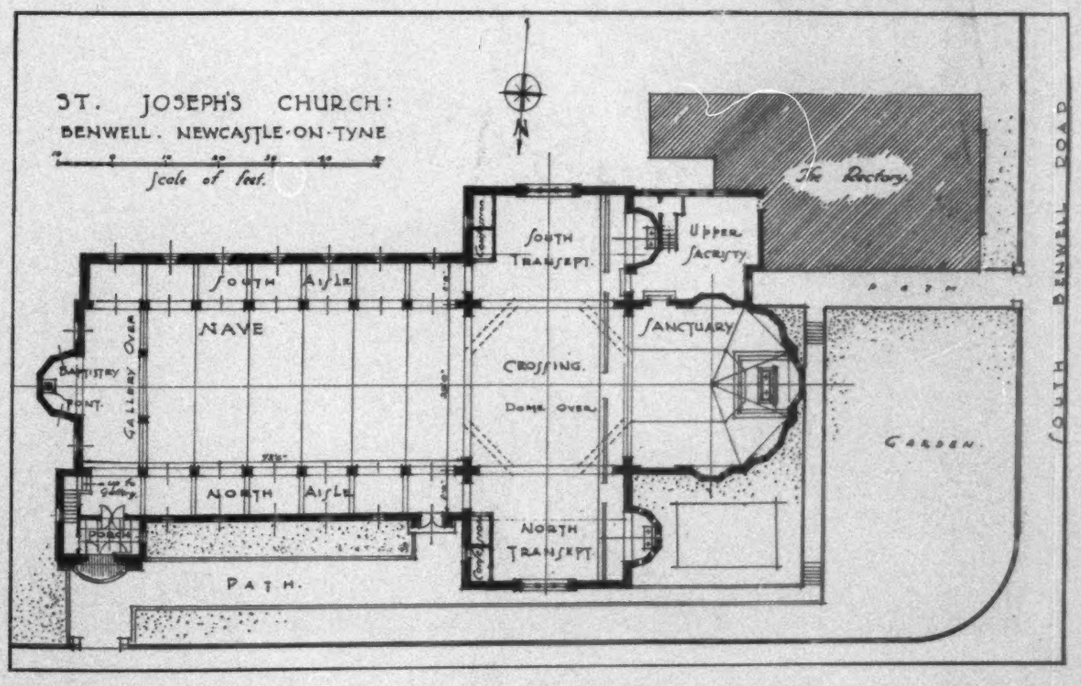
Following is a list of contractors associated with the work: McLaughlin and Harvey, Ltd., building works; H. Young and Co., Ltd., constructional steelwork; Clark and Fenn, Ltd., fibrous plaster and decorations; J. Jeffreys and Co., Ltd., heating, ventilation and hot water supply; The Patent Impervious Stone and Construction Co., Ltd., reconstructed stone facings to elevation; Garton and Thorne, Ltd., canopies, balustrading, door grilles and poster frames; Henry Hope and Sons, Ltd., Smethwick, Birmingham, metal windows; The Kleine Co., Ltd., reinforced concrete floors and balcony; The Marble Mosaic Co., Ltd., Bristol, marble and terrazzo floors and staircases; W. W. Turner and Co., Ltd., King's Heath, Birmingham, seating; Shapland and Petter, Ltd., Barnstaple, entrance doors, etc.; Mather and Platt, Ltd., fireproof roller shutter to back of stage, fire hydrant installation; A. E. Davies, ironmongery; Heaton, Tabb and Co., Ltd., Liverpool, carpets and curtain; Gardiner, Sons and Co., Ltd., Bristol, wrot-iron gates and grilles.



The "Gaumont Palace," Union Street, Plymouth.

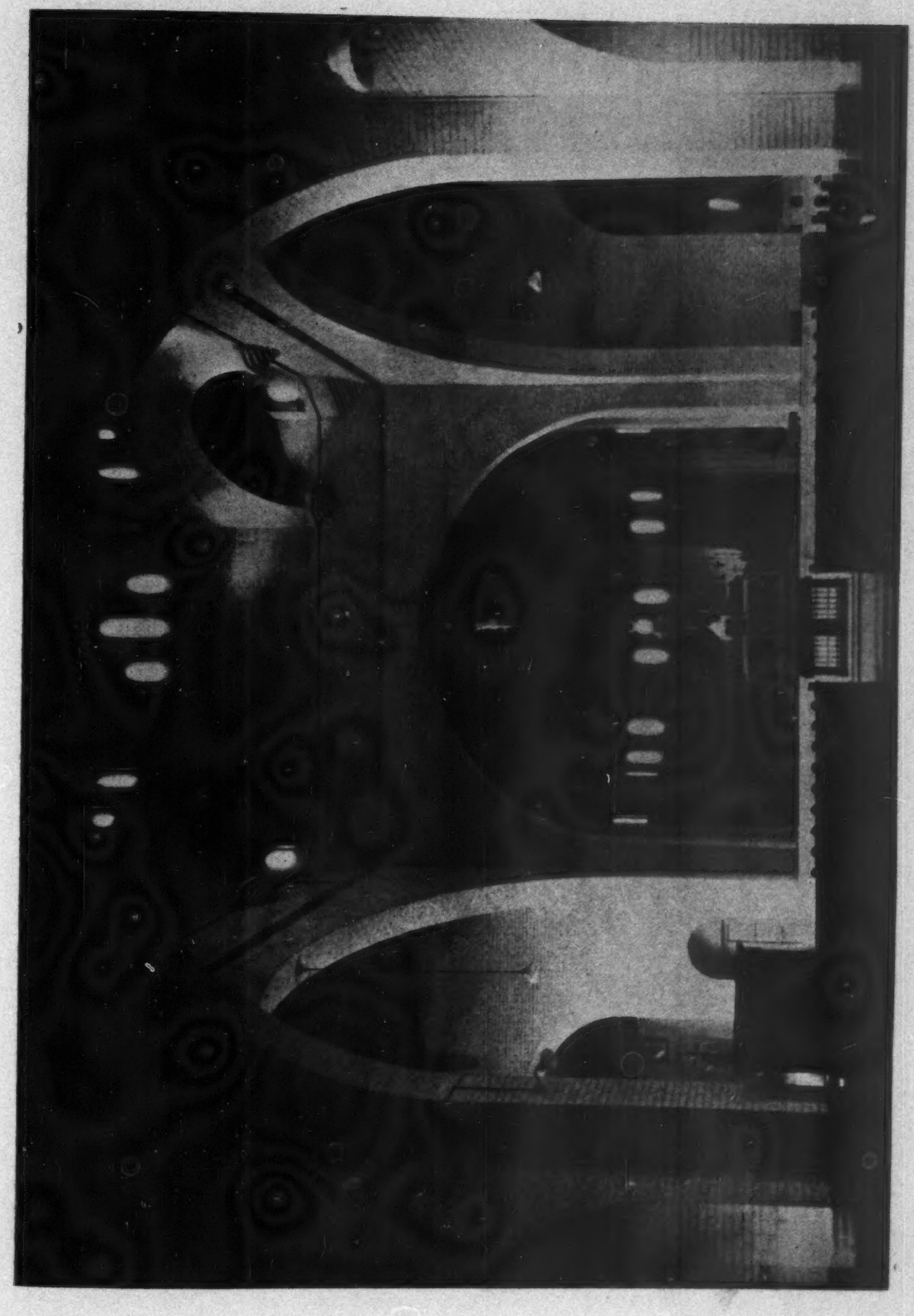
MR. W. H. WATKINS, F.R.I.B.A., Architect.

VIEW FROM NORTH-WEST.

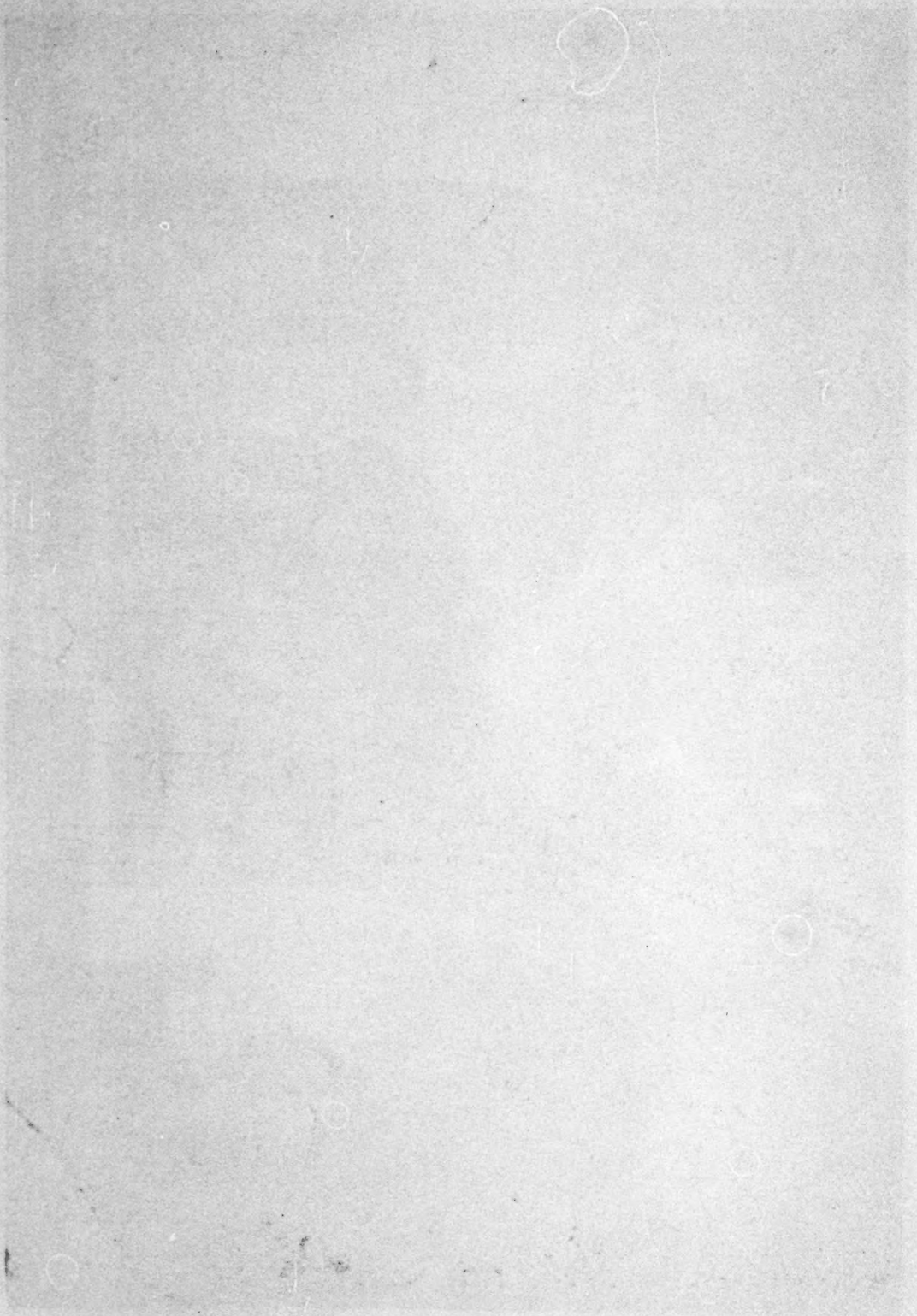


St. Joseph's Church, Benwell, Newcastle-on-Tyne.

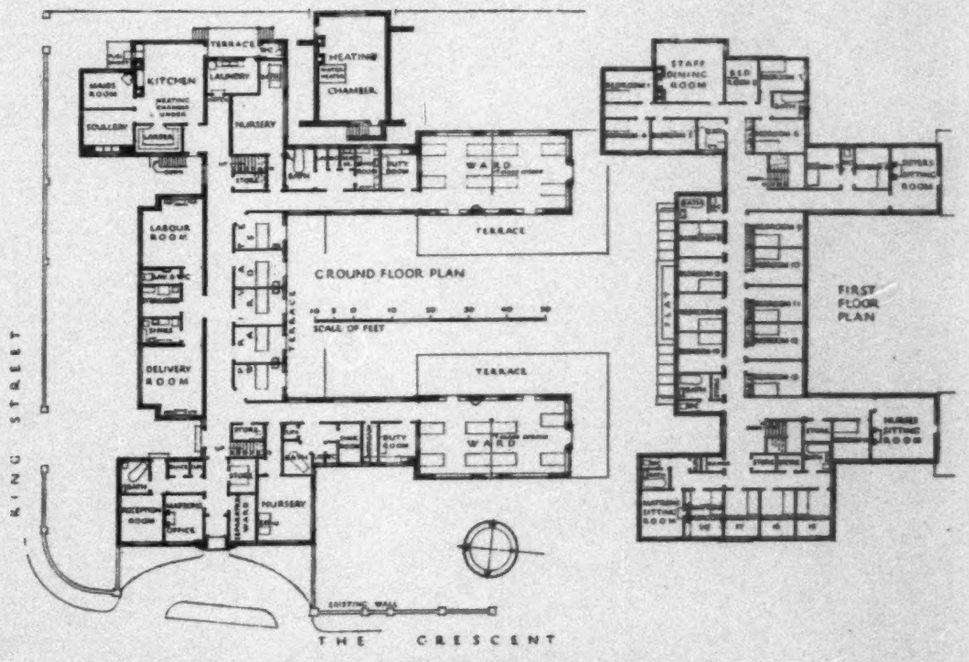
MESSRS. STIENLET AND MAXWELL, L. and F.R.I.B.A., Architects.



St. Joseph's Church, Benwell, Newcastle-on-Tyne: View towards Sanctuary.
Messrs. Stirrup and Maxwell, L. and F.R.I.B.A., Architects.

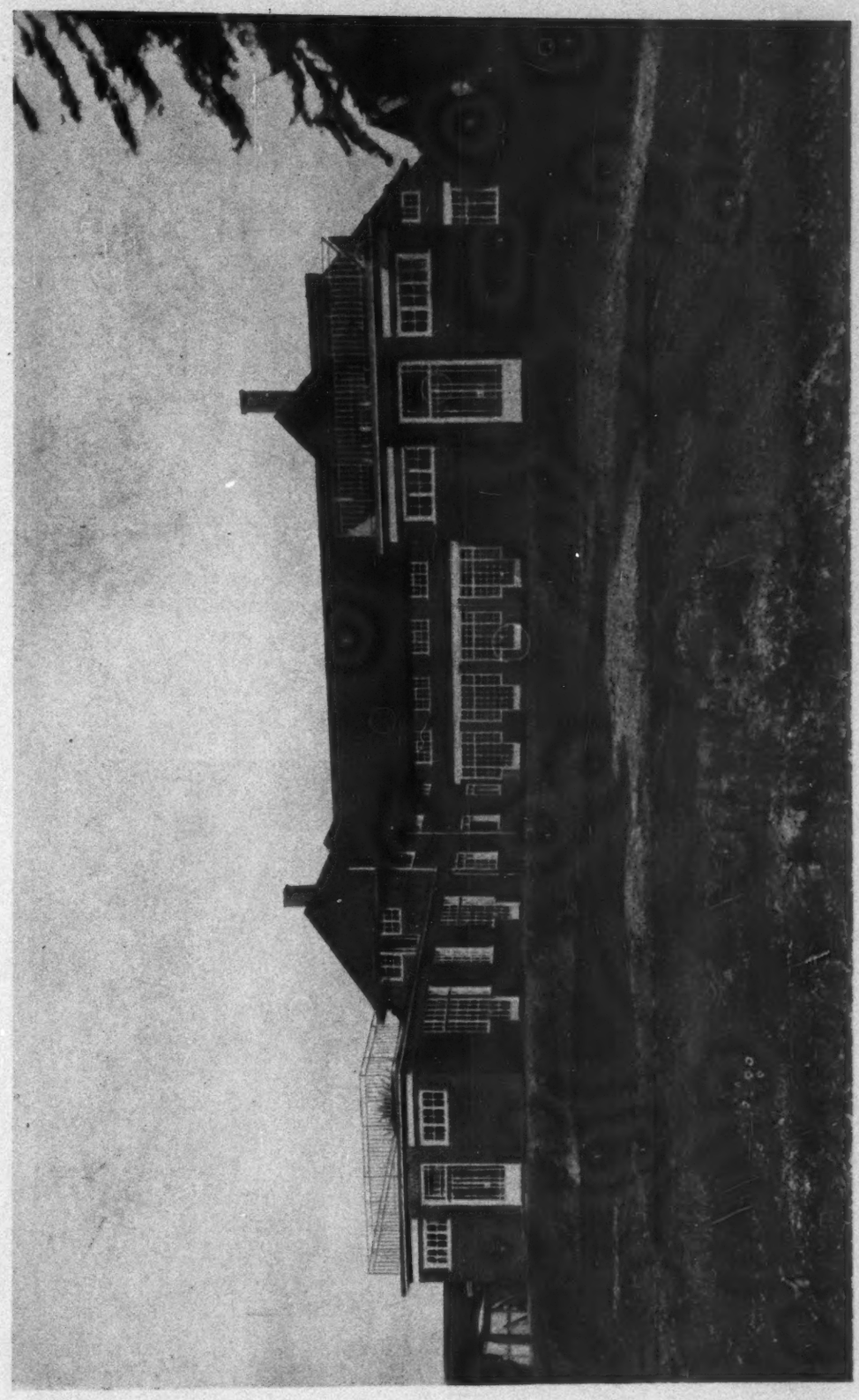


MAIN ENTRANCE.



Maternity Home, Watford, for the Herts C.C.

MR. BARRY PARKER, F.R.I.B.A., P.-P.T.P.I., Architect.



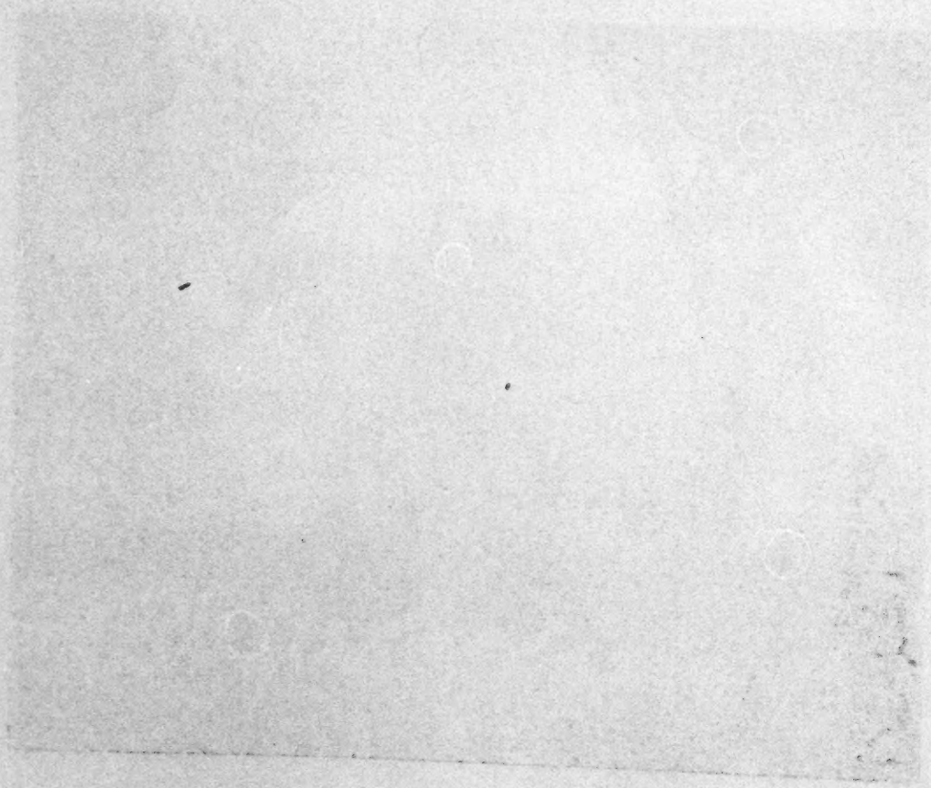
Maternity Home, Watford, for the Herts C.C.: View from South.
Mr. Barry Parker, F.R.I.B.A., P.-P.T.P.I., Architect.

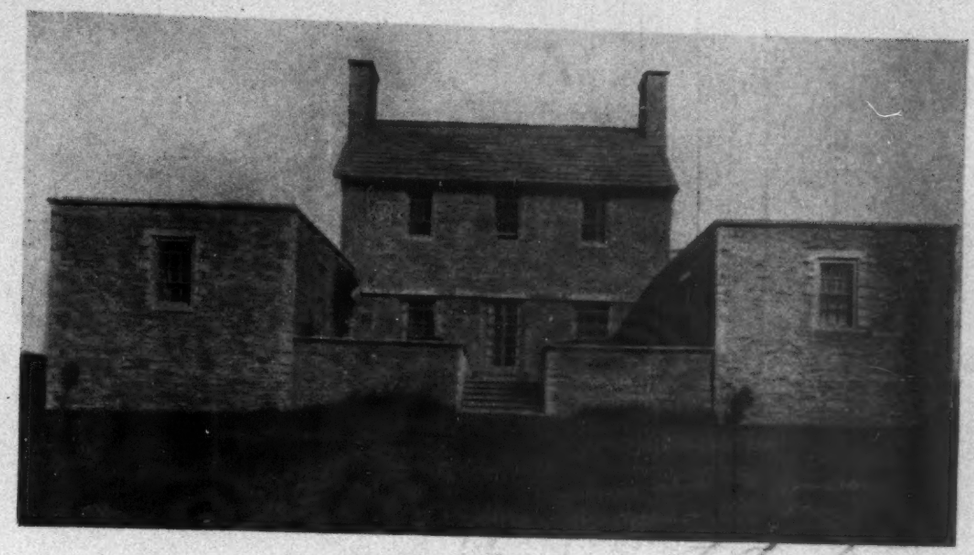
As It Was.

As Now Reconstructed.

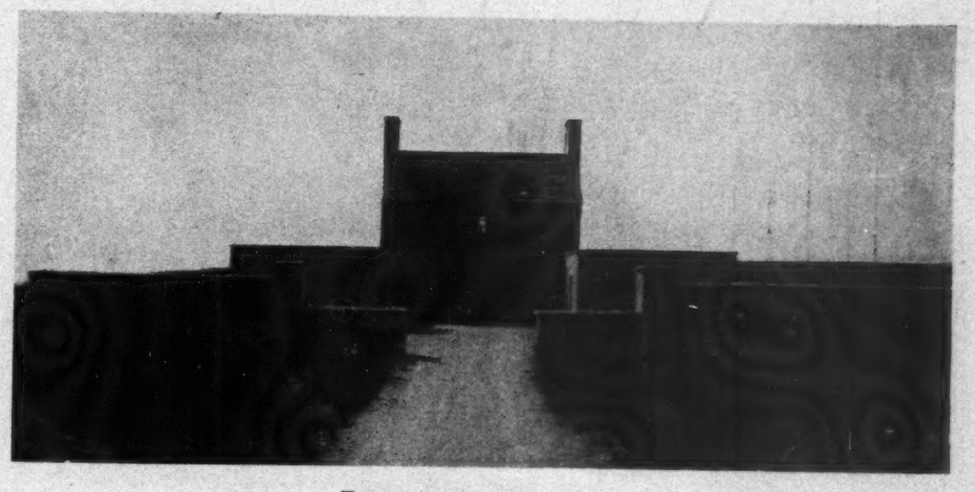
An Old Farmhouse, near Swanage.

Mr. P. Morley Horder, Architect for Reconstruction.

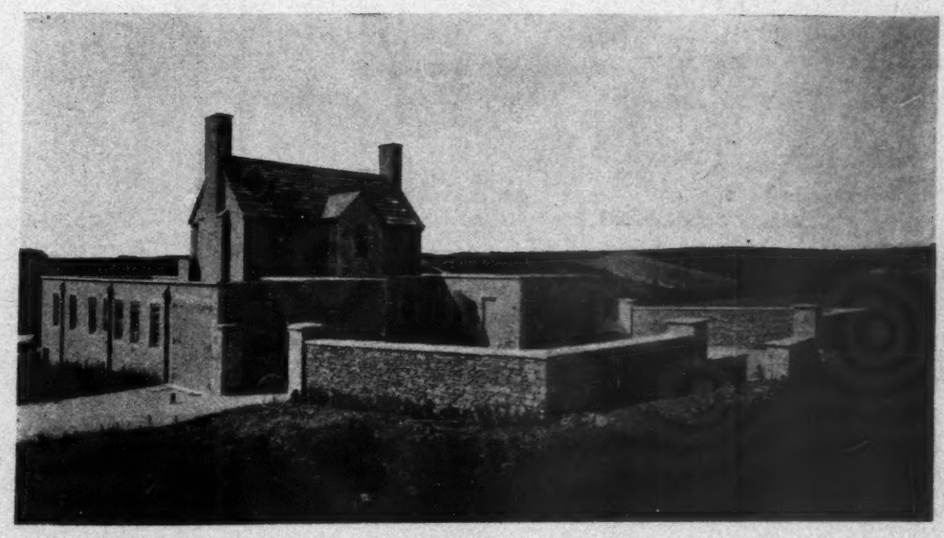




ELEVATION TO THE SEA.



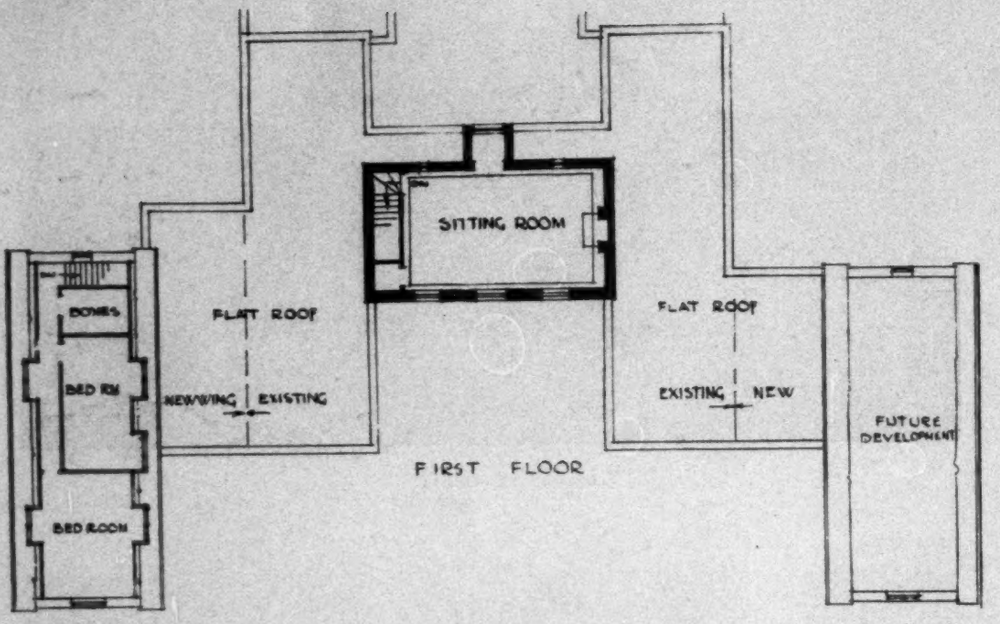
ELEVATION TO THE ROAD.

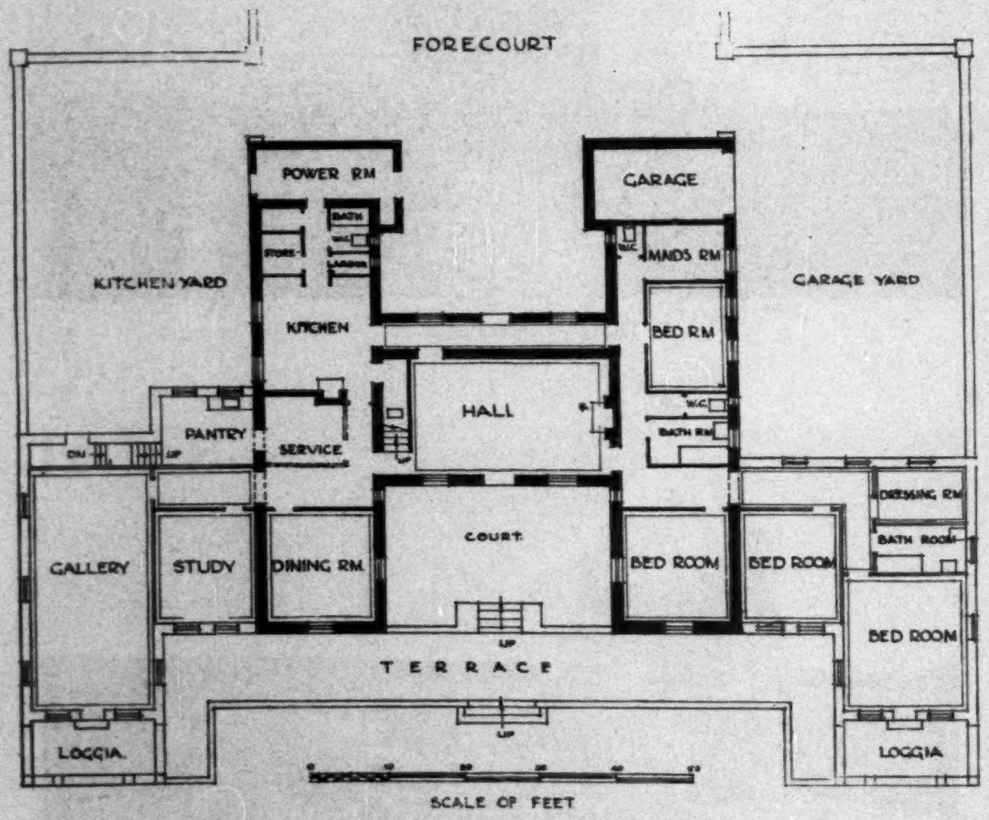


GENERAL VIEW.

"Scar Bank," Swanage.

MR. P. MORLEY HORDER, Architect.



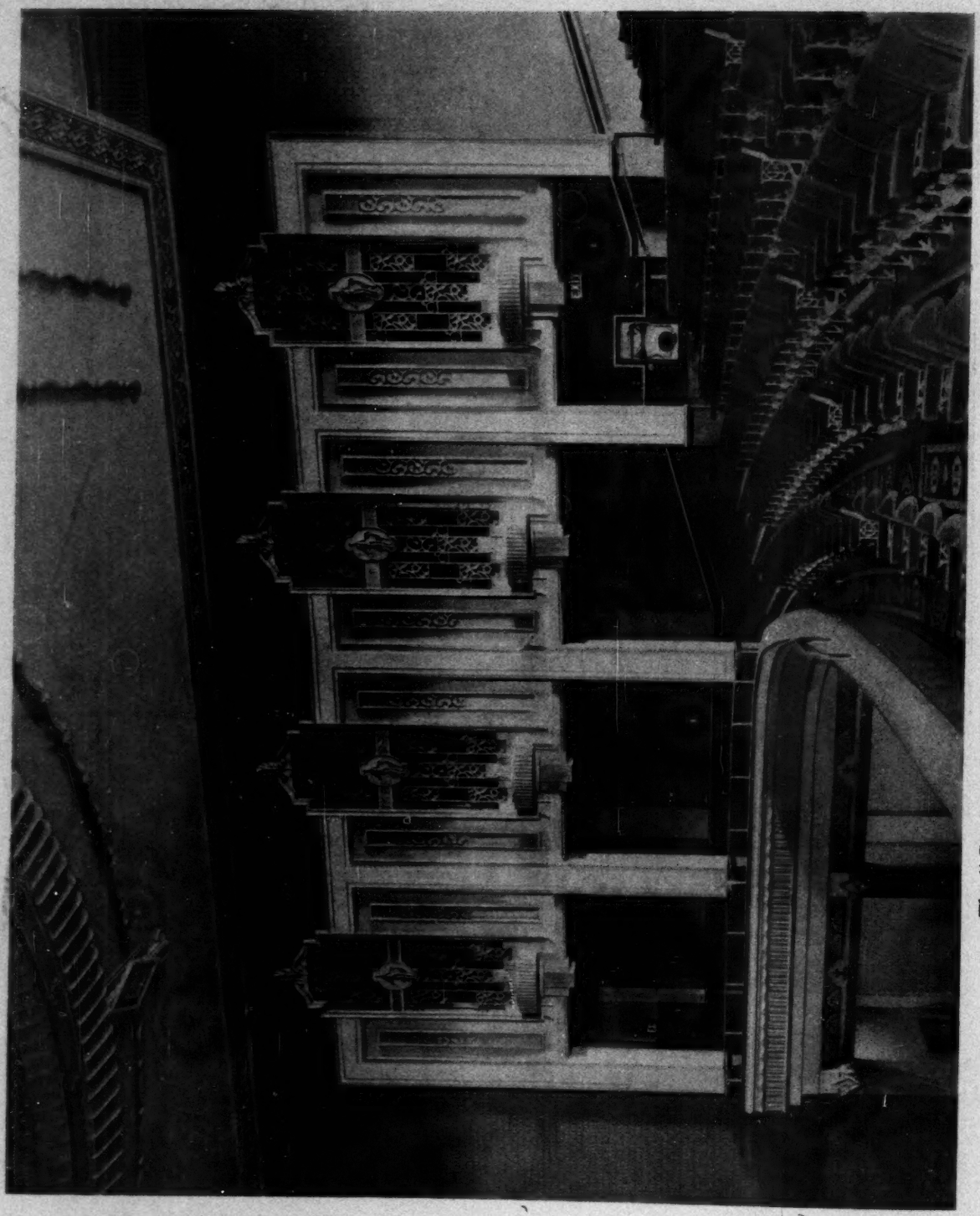


"Scar Bank," Swanage.

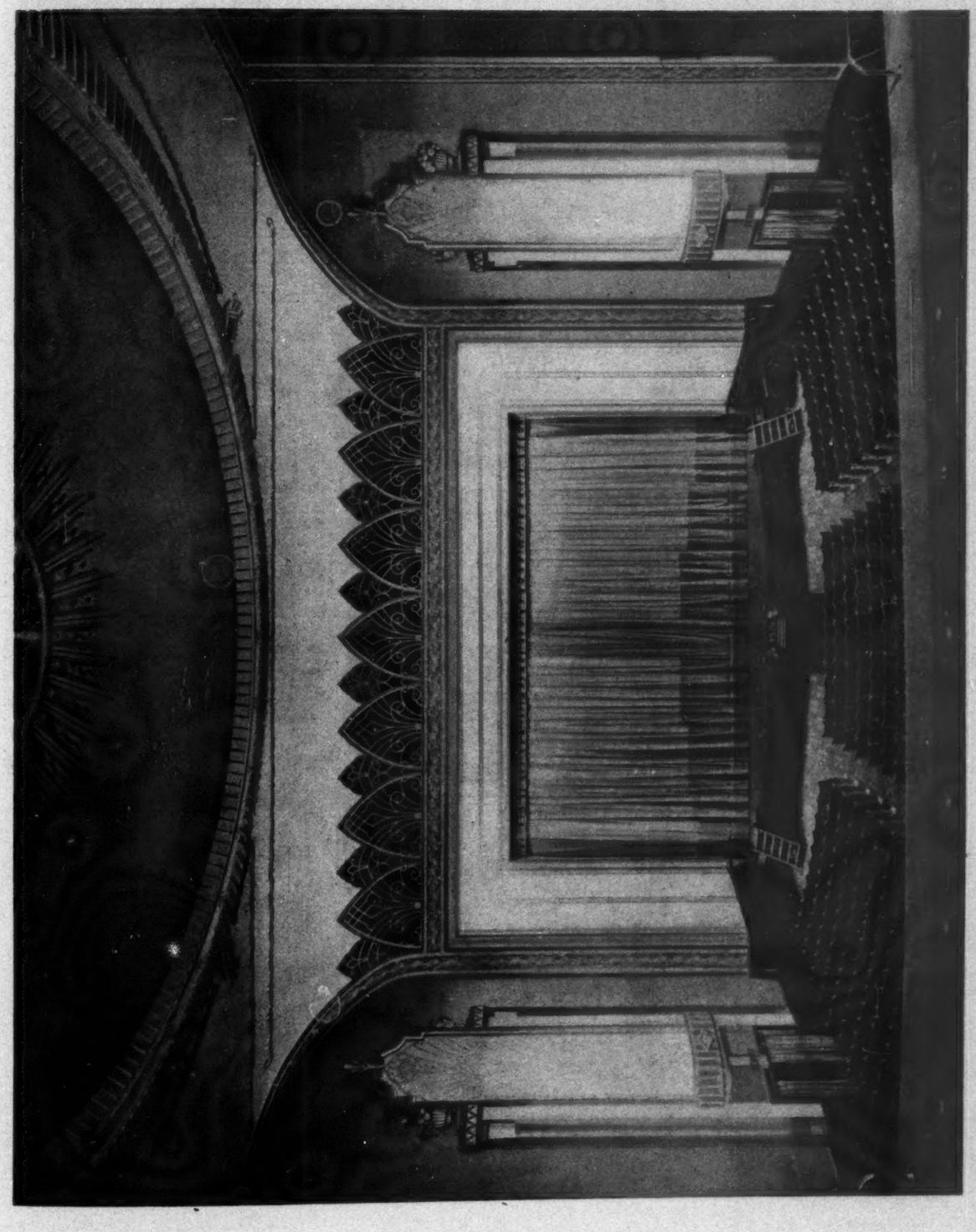
MR. P. MORLEY HORDER, Architect.

The "Gaumont Palace," Union Street, Plymouth.

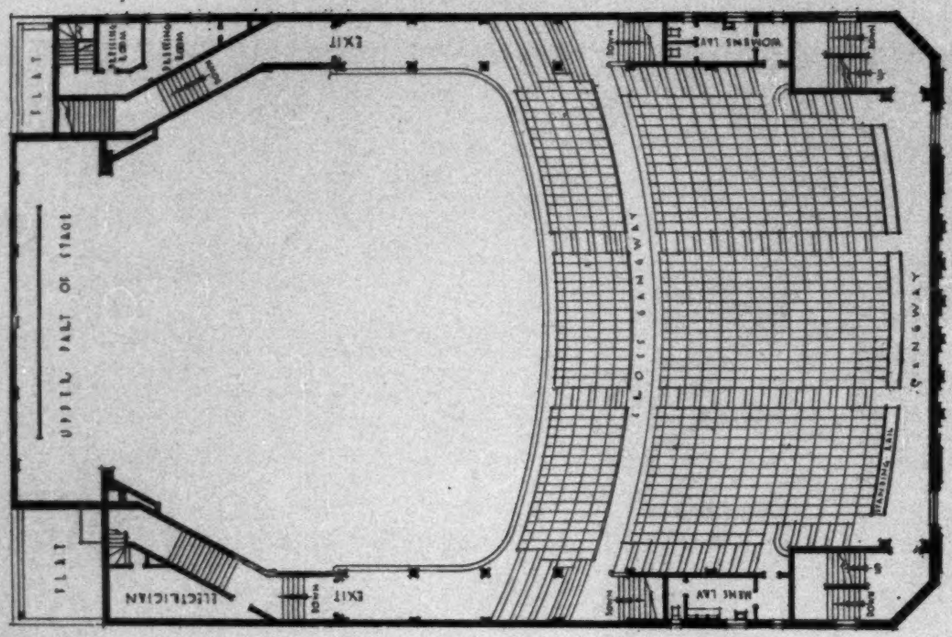
Mr. W. H. Watkins, F.R.I.B.A., Architect.



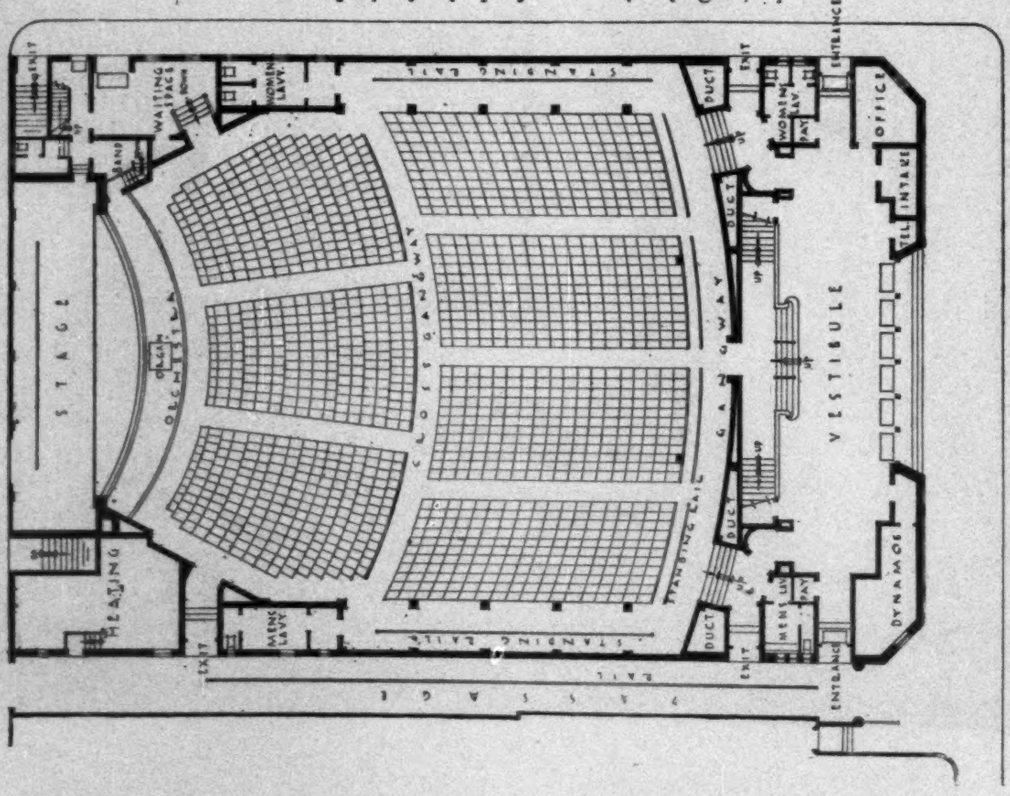
The "Gaumont Palace," Union Street, Plymouth: View across Circle.
Mr. W. H. Watkins, F.R.I.B.A., Architect.



The "Gaumont Palace," Union Street, Plymouth: The Proscenium Arch, from Circle.
Mr. W. H. Watkins, F.R.I.B.A., Architect.



BALCONY PLAN



GROUND FLOOR PLAN

The "Gaumont Palace," Union Street, Plymouth.

Mr. W. H. Watkins, F.R.I.B.A., Architect.

WHAT IS ARCHITECTURE?

LECTURING on "What is Architecture?" to a meeting arranged by the Norfolk and Norwich Association of Architects at the Stuart Hall, Norwich, recently, Mr. Robert Atkinson, F.R.I.B.A., strongly criticised the design of multiple shops.

Mr. Basil Cozens-Hardy, who was in the chair, said a terrific responsibility towards posterity lay upon the architect. He worked for the future, and it was the generations afterwards who praised or blamed him. There was a certain amount of security for lovers of Norwich in the fact that Mr. Atkinson had been charged by the Corporation to deal with the lay-out of their municipal buildings, if and when they were erected. He (the chairman) thought that in Norwich material was almost as important as design. He believed that in his report Mr. Atkinson had suggested that grey bricks should be used. He did not like grey bricks. They were frigid. He liked the warmth of the red brick, and he did not think that grey bricks were natural in Norwich.

The lecturer commenced by saying that architecture covered so wide a field that, humanly speaking, it was not possible to be a perfect architect or a complete architect. In no other profession, except the medical profession, were such depths of study and so prolonged an experience necessary. He often heard the question, "Why cannot we build like the old cathedral builders?" They could not do it because they had to suit the times. They had to build so that people could carry on their occupations within the buildings. Everything they built must have a definite use and a place in our daily life. They had to be logical and not sentimental, though when they did get a chance to build a cathedral they could "deliver the goods," as, for instance, in Liverpool Cathedral.

Architecture was the most vital art. Every other art must fit into it in some way or other. The painter and the sculptor came in to decorate the architect's building. The public were rather inclined to look upon architecture from a very superficial point of view and from a point of view which was difficult to understand. They would very often worship a local cinema, while some fine building in the same neighbourhood would be rather looked down upon. They were rather impressed by size, by a great bank which was rather larger than the town hall, or by a cinema which was all plush and red paint and gold columns.

On the other hand, he did not hold a brief entirely for architects. There were many important buildings which were overdone in design. They were so over-elaborated and broken up that in the aggregate they were objectionable. In a general way, however, the public were not deceived. They were never enthusiastic, for instance, on the Gothic revival. What they wanted to see was a building which fulfilled its modern functions. Modern things, such as aeroplanes and great engines and great liners were intensely interesting, and he thought the public expected a development along these lines from the architect. They were quite willing to accept modernity if it was reasonable and good and a development of the function of the building. He thought the present tendency in architecture was to make the bulk of their work simple and concentrate upon a few very, very fine things which would have the greater effect because of their contrast with the simplicity of the background.

The lecturer went on to say that an architect had to study the living and working conditions of the people, because he never knew what type of building he might have to plan. Our living conditions in this country were better than they had ever been, and probably better than those in any other country in the world, and that was largely due to the architects. Our flats for workmen's dwellings, although they were simple, had a good character, were well designed, and filled their purpose as well as anything which ever was done before. Our factories were not so good as they might be. They were improving, but usually the sites were too small, and they had not always enough space for canteens and for the recreation of the employees. There were, however, many examples which were really extraordinarily good. Some of them, of plain brick with finely spaced window openings, were more successful than others with a greater degree of ostentation. Our educational buildings were not so good as they might be, but they were improving. Our hospitals were very much behind the times. They were starved, not by the public, but by the doctors. The doctors thought of nothing but their equipment, and the buildings were very often behind the times before they were commenced. An American who recently visited one of the large London hospitals was appalled at the number of corridors, and asked, "Do you provide your nurses with roller skates?" In America the hospitals were of anything from six to twenty-two floors, and you got more concentration of your department and better lighting.

Our churches were improving. Some of the simpler suburban churches were as good as they could be. They were not competing with the old buildings—that was impossible—but they did produce a simple, dignified, and cheap church where it was needed. They were functional and good to look at, and very often well designed acoustically. Some of the newer theatres were quite fine, but, generally speaking, our theatres were very bad indeed. Business premises were becoming very fine indeed. They gave you all the possible daylight, and were clean, straightforward pieces of work. An exception was provided by the multiple shops, which were the curse of the towns, just as the petrol stations were the curse of the villages. Their proprietors bought their shop designs like tinned milk. He had seen a beautiful old Georgian house covered up by a multiple shop front, all but the eyebrows of the first-floor windows. Another one was so wide that it overlapped the quoins of its neighbours. He had not seen one of those shops being made, but he should think they took the shop-fronts and shot them on with one of those cement guns. Citizens had a right to know that their town or village would be protected. Obnoxious trades were forbidden, and obnoxious buildings should also be forbidden. One could get rid of an obnoxious trade, but one could not get rid of an obnoxious building once it was put up.

On the proposition of Mr. Fred Henderson, seconded by Major S. E. Glendenning, a hearty vote of thanks was passed to Mr. Atkinson.

DISCOVERIES IN THE ABBEY

THE recent discoveries in Westminster Abbey were described at a meeting of the Society of Antiquaries, held in Burlington House, by Mr. Lawrence E. Tanner, F.S.A. (Assistant Keeper of the Abbey Muniments), and the Secretary of the Society, Mr. A. W. Clapham.

At the end of last year, said Mr. Tanner, during the cutting of a trench across the nave for a new heating pipe, an obstruction was encountered a few feet to the north of one of the great pillars on the south side of the Abbey, at a point a little west of the door leading to the West Cloister. A considerable stone foundation was found to run east and west, and immediately recognised as that part of the nave of the Church of Edward the Confessor which remained joined on to the new Choir of Henry III's building until the present Nave was begun in the second half of the fourteenth century. Hitherto the only portions of the Confessor's church known to exist were the bases of some piers found by Sir Gilbert Scott in 1866 under the Presbytery, and a portion of the Apse found by Professor Lethaby in 1910 under the floor of the Confessor's Chapel. Further investigations took place this year, and the foundations were traced to their western limits, just within the existing west wall of the Abbey. On the north side of the Nave corresponding foundations were not found, and it was apparent that these must have been on the same line as the existing pillars of the Nave, in the rebuilding of which they were completely destroyed.

More than twenty years ago the then Dean of Westminster, Dr. Armitage Robinson (now Dean of Wells), had disputed the orthodox theory that St. Edward left his church unfinished at his death, pointing out that the written evidence gave no hint that St. Edward's church was unfinished at the time of its consecration. The Dean had relied especially on the words of Sulcard, a monk of Westminster in 1072-1083, who wrote of the building by the Confessor that "being finished to the very *vestibulum* it was shown forth to the Bishops for consecration and to all the nobles of the realm."

Nothing in the foundations recently disclosed disproved the Dean's theory that the church was finished at the Confessor's death. They might be of that date or they might be slightly later. There was, however, a question of the meaning of *vestibulum*, which was usually taken to indicate some kind of porch or sacristy. In this instance, on the other hand, it seemed to mean, as Professor Lethaby had suggested, the Nave. A similar and somewhat remarkable use of the same word had been observed in an account by Hariulf (a contemporary of Sulcard) of the Church of St. Riquier in Picardy, and we might, with some hesitation, substitute "Nave" for "Porch" in the writings about Westminster. We could then adopt Professor Lethaby's suggestion and conclude that this church was left unfinished at the Confessor's death.

Mr. Clapham dealt in his paper with the architecture of the building. What had been found, he said, on the south side of the present Nave was the remains of the last five piers and south respond of the South Arcade of the eleventh-century church. That whole structure had stood upon a massive sleeper wall of considerable depth and somewhat irregular outline, which incorporated a number of fragmentary bricks probably of Roman origin. Upon the sleeper wall were built the piers of the Arcade and the South-west Tower. The arcade-piers were of alternating simple and compound form, forming a series of double bays. Within a period not greatly removed from that of the original building two alterations or reinforcements were made, perhaps because of some instability in the building. The first involved the addition of an extra order under the original arches and the insertion of additional shaft-bases on the north faces of the major piers. The second consisted of the building of screen or blocking walls between the added pilasters. The ashlar used in the plinths of the piers, pilasters, and blocking of walls was entirely of Reigate stone, treated on the surface with coarse diagonal tooling. The mason work was of the somewhat rough-and-ready order, which implied an early date and an inexperienced hand. The axis of the early Arcade and Nave had a pronounced tilt to the south-east from that of the existing building, and that would appear to be continued as far as the early East End. A reconstructed plan would show a church with the internal length of 322 ft., consisting of an aspidal Choir of two bays, Transepts, a Nave of 12 bays, and two Western Towers. Those features, with their architectural additions, undoubtedly derived from Normandy, the general plan being that almost universally adopted in Norman abbey-churches of the eleventh century. In general dimensions the Confessor's church far exceeded any of those Norman churches which had survived. The church which approached it most nearly was the Cathedral of Rouen. [The above is abstracted from a report in *The Times*.]

TOWN PLANNING AND AVIATION

We commence in this issue the First (Interim) Report of the R.I.B.A. Aerodromes Committee, the Secretary of which is Mr. John Dower, A.R.I.B.A. The Committee is a composite one, for representatives of the Air Ministry, the Ministry of Health, Imperial Airways, aircraft manufacturers, etc., in addition to architect-members, were appointed to serve. The programme of work on which the Committee are engaged includes the collection of information to form a survey of the development of aerodromes and their buildings in Britain and throughout the world, the examination of the technical requirements governing aerodrome design, the production of interim reports on the various aspects of the matter, and of a final report embracing all their conclusions.

The Committee have devoted their preliminary attention mainly to the broader town-planning aspect of their subject, the consideration of which naturally preceded the more detailed examination of aerodrome buildings. The present First (Interim) Report is, therefore, entitled "Town Planning and Aviation." It is hoped that the advance publication of the information they have collected and the general conclusions they have reached in this aspect may be of interest and use to the many persons and bodies now beginning to be concerned in plotting the groundwork of British air development. Later reports will deal with the more purely architectural aspects in the lay-out and design and technical requirements of aerodrome buildings.

THE REPORT.

The Need for Civil Aerodromes.

British aviation development in all matters affecting the aeroplane, whether civil or military, is well abreast, and in many departments well ahead, of that of other countries. The present and projected services of the British "Imperial Airways" overseas transport system bear favourable comparison with the corresponding services elsewhere. But Great Britain lags at present far behind Germany and the United States, and several other and smaller countries, in the development of internal air transport, and in the provision of aerodromes, with their buildings and other ground equipment, upon which such development must rest. For lack of what we may summarise as adequate "groundwork," the country is suffering serious delay in the growth of a new means of transport of wide application, great fluidity and vastly enhanced speed, which might contribute largely to her future prosperity.

To look far ahead or generalise with any certainty in a sphere of human activity so widespread, so highly technical, so revolutionary and so rapidly changing as aviation, is obviously very difficult, if not impossible. It is, however, probably safe to say that Great Britain cannot be considered adequately equipped for the flying of the next ten years until there are landing fields of sufficient size for safety, properly marked and with some fixed minimum of equipment, at intervals of not more than twenty miles. The landing fields along heavily-used air routes and in areas with high density of population will need to be at much smaller intervals—American expert opinion is already asking for a maximum of ten miles. Of the landing fields required on this basis of calculation—some three hundred at the least (excluding all military aerodromes and all seaplane stations)—a considerable number would be in comparatively remote country places, and only for occasional and emergency use; but the majority would be in proximity and organic relation to towns, and to the roads and railways serving them, and as such would pass out of the category of mere landing fields into that of permanent aerodromes, with established staff and equipment and buildings comparable to those of the railway stations, garages and road transport offices serving the same towns.

The Requirements of a Landing Field.

Before considering the methods by which such a provision of aerodromes may be secured and adequately equipped, it is desirable briefly to outline the elementary requirements of any landing field to secure reasonable safety in use by aircraft. These have been established and described in the Air Ministry's "Notes on the Location, Size and General Requirements of a Site for a Civil Aerodrome," and it is not here necessary to do much more than summarise that pamphlet. Even disregarding (for the moment) the many commercial and "amenity" considerations which must have great weight in determining the choice of sites, the location of aerodromes is a matter for expert judgment of many, often conflicting factors. Comparative freedom from fog and low cloud is a matter of the greatest importance; thus it is normally undesirable that aerodromes should be placed near the sides of towns over which smoke and dust and consequent fog are blown by the prevailing wind; low-lying ground near any large expanse of water, whether river, lake or estuary, is often equally unsuitable through liability to ground mists and fogs. On the other hand, while higher plateau lands are usually free from fog, too high ground may be equally unsuitable from excessive liability to low cloud.

Almost the whole of Great Britain is favoured with extensive grasslands which, with comparatively slight treatment, could provide an admirable surface for use by aircraft, and rainfall is everywhere sufficient to keep such grassland, with adequate attention, from breaking up in use. Thus the costly expedients of artificial surfacing with oil or tar dressings and extensive concrete runways so widely adopted in America are not normally necessary here; though, as soon as use is heavy, some concrete paving or tarmac for an "apron" space of at least fifty yards in depth in front of hangars will become necessary, and surfacing treatment may be required for other areas subject to constant wear. This treatment not only facilitates the handling of aircraft and saves ground staff work, but also provides valuable protection to the propellers of aircraft which are very liable to damage from mud and water sucked up when the engine is running at speed.

Where a grass surface is relied on for the field itself a sufficient firmness (roughly a capacity to withstand a rolling pressure of one ton per square foot) must be maintained and a firm subsoil and good drainage are therefore essential, especially in the vicinity of hangars, etc., where the greatest concentration of traffic occurs. Probably some degrees of artificial drainage will sooner or later be necessary in every case to supplement natural drainage. It is normally a false economy to delay drainage operations; if the subsoil is unsound, use will soon destroy the surface and make the necessary treatment, when it is undertaken, more radical, more difficult to organise and much more expensive. But the costliness of schemes involving elaborate drainage operations over the whole field at the outset must under present conditions be prohibitive, and all waterlogged areas or fields liable to extensive flooding should be avoided.

The actual landing space of an aerodrome should be approximately level, though a slight fall, especially from the centre to the edges, will assist the quick drainage of heavy rainfall. The Air Ministry standard limits the average gradient to 1 in 50 and the maximum gradient of any particular undulation to 1 in 40. In many parts of Britain no otherwise possible site will be found to obey this condition, and some levelling operation will be needed. The probable cost of such work is a factor that should not be forgotten in the choosing of sites. Levelling, however, may on some sites expose a clay or other subsoil which may be very difficult to drain or surface; while it is difficult to ensure a firm level surface on extensive patches of deep making-up. After any required drainage and levelling works are completed it is necessary to secure a reasonable smoothness and evenness of surface for the landing space; the Air Ministry's standard is such surface as will allow a motor car to be driven over it at twenty miles per hour without discomfort. Close attention must be given to maintaining this standard when it has been achieved. All damage caused by tail-skids, etc. (or by moles), should be made good as it occurs, and regular mowing and rolling and occasional fertilising are necessary.

The effective size of an aerodrome is in terms of the minimum length of clear run available in all directions. A landing space for general use by aircraft of all normal sizes must have at least six hundred yards, and should, if possible, have eight hundred to one thousand yards in every direction; for aerodromes limited to use by light aeroplanes only the dimensions may be reduced to a minimum of four hundred yards. Where there is reasonable approximation to square or circular shape, these conditions may be taken to imply a necessary area of from sixty (thirty for light planes only) to two hundred or more acres, free from all obstructions and available exclusively for the rising and landing of aircraft. Where possible, a circular shape is obviously the most economical of land. Additional space beyond the minimum is most valuable when it provides a greater length of run in the direction most heavily used—that of the most prevalent wind.

It is not sufficient, however, to fix minimum dimensions for the landing space: its whole perimeter must be kept clear of any obstructions that could constitute a danger to aircraft. A considerable further area all round the field must therefore be purchased or otherwise controlled, so that on it no building, tree or other object rises to a greater height than one-fifteenth of its distance from the edge of the field. Thus, if the aerodrome is to be equipped with hangars and other buildings forty feet high, a space of six hundred feet must intervene between them and the effective edge of the landing area. Even overhead telephone and telegraph wires along a road bounding the aerodrome constitute dangerous obstructions as much through their invisibility as their height. Their incidence and the possibility of getting them put underground are a matter of great importance in the choosing and developing of sites. In this connection it is clear than an aerodrome cannot be considered fully established for safety until the boundary of the actual landing area absolutely free from obstructions on this 1 in 15 rule has been marked out by a continuous line, or spot markings at frequent intervals, of a character easily recognisable from the air, and, if night use is intended, by a corresponding series of boundary lights which cannot be mistaken for anything else.

In practice it has not been possible to keep many existing aerodromes entirely free from obstructions on all sides, and no doubt some future aerodromes will have to share the same deficiency. Where the "flying gaps" between such unavoidable obstructions are well distributed and collectively cover the greater part of the perimeter, reasonable safety can be presumed; but the condition is not a desirable one and no effort should be spared to avoid it. No "flying gap" is considered satisfactory for Air Ministry licence which is less than two hundred yards in width. Steps should, in any case, be taken to ensure that no additional obstructions can be added in the future; and really high obstructions, such as wireless masts, should be avoided at all costs. Just as additional length of run is most valuable in the direction of the most prevalent wind or winds, so freedom from obstructions of any kind is most valuable when it occurs in the same line. In particular, it is always desirable that the aerodrome buildings, whether they constitute technical obstructions or not, should, if possible, be placed on the side parallel to and not on the side across which the most prevalent wind blows.

(*To be continued.*)

SOCIETIES AND INSTITUTIONS

FACULTY OF ARCHITECTS AND SURVEYORS.

THE fifth annual dinner of the Faculty of Architects and Surveyors was held on Friday, December 11, at the Hotel Metropole. A large gathering was present, amongst whom were Sir Charles C. Allom, F.R.S.A. (President); Sir Clement Kinloch-Cooke, Sir William Arbuthnot Lane; Messrs. E. F. Harmer (Past President), R. H. Harry Stanger (President of the Institution of Structural Engineers), Montagu Evans, F.S.I., W. G. Percy, E. A. Sandford Fawcett (President of the Institution of Sanitary Engineers), and H. B. Whitfield (Secretary).

After the customary loyal toast, Sir William Arbuthnot Lane proposed the toast of "The Faculty of Architects and Surveyors." He complimented the Society on its work. To see the good work that architects were doing, one had only to go to Edmonton, where beautiful houses had been erected and grounds laid out as open spaces.

The President (Sir Charles Allom), replying, said the Society numbered 1,200 members. They were grateful to Sir Clement Kinloch-Cooke for the help he had given them in getting the Registration Bill through Parliament. He thought it was a great misfortune that any of the arts should become hidebound, and they had received sufficient support in the House of Commons to enable men who had other occupations to become recognised as architects. The speaker recalled the fact that at the age of 24 Sir Christopher Wren had become a renowned astronomer in Europe, and did not practise architecture until he was past 30. Surely it could not be more clearly demonstrated that not only could a man who had not earned his living as an architect become an architect, but that he could become a big one! Both Robert Adam and his brother built houses as well as designed them. We suffered at the present time from building laws, local acts, and so on, continued the speaker, which were not up to date in many respects, and which interfered with the creation of new methods. He grieved to think that it had taken so many years to bring the building side of architecture up to date owing to these by-laws.

The President then presented Mr. E. F. Harmer with a medal for his services as President of the Society. Mr. Harmer replied appropriately, and proposed the toast of "The Guests and Kindred Societies" in suitable terms.

Mr. Harry Stanger, in reply, said the Institution of Structural Engineers had a number of architect-members, and there was not the slightest doubt that architects were finding it absolutely necessary to use the new materials which were coming into use throughout the world. Effects could be obtained, with perfectly plain concrete, which we had no idea of in this country.

Capt. Montagu Evans, F.S.I., proposed the toast of "The Ladies," which was responded to by Mrs. W. P. Reynolds.

Sir C. Kinloch-Cooke proposed the toast of "The President," to which Sir Charles Allom replied.

THE WELSH SCHOOL OF ARCHITECTURE.

Prize Distribution and Exhibition of Designs.

The annual prize distribution and exhibition of designs of the Welsh School of Architecture, the Technical College, Cardiff, took place on Thursday, December 10. Mr. Percy Thomas, F.R.I.B.A., presided, and was supported by the Lord Mayor of Cardiff (Alderman C. W. Melhuish) and the Lady Mayoress (Mrs. O. Coleman), Principal Charles Coles, B.Sc., Mr. W. S. Purchon, M.A. (head of the school), Alderman G. Fred Evans (chairman of Cardiff Education Committee), Mr. W. J. Williams (director of education, Cardiff), Principal Rees, and members of Cardiff City Council. Mr. Thomas said that the standard of work this year was even higher than it had been in the past. He advised students not to be discouraged nor to forsake the profession if they found it difficult to secure a post. Theirs was not the only profession suffering through the bad times, and they must all hope for a return to prosperity.

In his address on the work of the school, Mr. W. S. Purchon said the Welsh School of Architecture was opened on March 20, 1920, rather more than eleven years ago. Such had been the development of the school from small beginnings in those days that last year they were working as one of the leading schools in the scheme administered by the R.I.B.A., with their examinations recognised as exempting their successful students from the whole of the examinations leading to the Associateship of the R.I.B.A., including for the first time the subject of professional practice. The R.I.B.A., acting through its Board of Architectural Education, had been a great source of strength to the school, and they had to thank the South Wales Institute of Architects for very considerable support and co-operation given in its corporate capacity, and they also thanked several of the most distinguished of their local architects for helping individually by the award of prizes, by giving students opportunities for acquiring practical experience, and by acting as honorary lecturers, examiners, and members of design juries. In this connection he mentioned their chairman (Mr. Percy Thomas, O.B.E., F.R.I.B.A.), their President (Mr. J. Herbert Jones, F.R.I.B.A.), their vice-president (Mr. T. Alwyn Lloyd, F.R.I.B.A.), Mr. H. Norman Edwards, Mr. C. S. Thomas, F.R.I.B.A., Mr. Ivor Jones, A.R.I.B.A., Mr Harry Teather, F.R.I.B.A., Mr. C. F. Jones, A.R.I.B.A., Mr. H. Budgen, F.R.I.B.A., Mr. E. C. M. Willmott, A.R.I.B.A., Mr. E. W. David, LL.B., and Mr. A. N. S. Sair, A.M.I.C.E.

He was sure they would all like to offer their congratulations to Mr. Percy Thomas, of Messrs. Ivor Jones & Percy Thomas, on the award of the Royal Institute Medal for South Wales, and to Mr. T. Alwyn Lloyd on his election as vice-president of the Town Planning Institute. The speaker also mentioned the very valuable help given by Mr. F. J. North, D.Sc., and Mr. H. A. Hyde, M.A., Keepers of the Departments of Geology and Botany in the National Museum of Wales; and paid tributes to the work of the staffs and others. They were not striving at specialisation in one direction, but rather were aiming at a thoroughly well-balanced scheme of architectural education. They were trying to build up this scheme on as uniform and as sound a foundation as possible, and were endeavouring to base their work in design on a sound knowledge of the theory of design, of the best work of the past, of modern requirements and of modern construction, both theoretical and applied. They aimed at the full co-ordination of their studies of design and construction, and at raising the standard of draughtsmanship both in their designs and working drawings. They encouraged the imagination of their students by means of the weekly short subjects in design and architectural construction and their ability in research by means of the thesis, and endeavoured to interest them in the wider problems of town planning, and as they left year by year, it was with the hope that they would go out into the world with both the ability and the necessary qualities of character to overcome the difficulties they would meet and to uphold the traditions of a great profession.

The Lord Mayor presented the prizes and diplomas to the successful students.

Winning designs and measured drawings were on exhibition, and great interest was taken in the studios of the school, in which were exhibited theses prepared by senior students, examples of published work, and specimens of work done during the course.

A vote of thanks to the Lord Mayor and to Mr. Percy Thomas was proposed by Mr. J. Herbert Jones, F.R.I.B.A., President of the South Wales Institute of Architects, seconded by Councillor Frederick Jones, chairman of the Technical College Committee, supported by Principal Charles Coles, B.Sc. and carried with acclamation.

The following is the award of prizes, certificates and diplomas for session 1930-31 :—

The Lord Mayor's Prize for Third Year Students (£2 2s.), presented by Alderman R. G. Hill Snook, J.P. (Ex-Lord Mayor), H. J. W. Lewis.

President's Prize for First Year Students (£3 3s.), presented by Mr. J. Herbert Jones, F.R.I.B.A., Miss A. M. Wride.

Second Prize (for First Year Work), presented by the Head of the School, W. G. Sweet.

The Working Drawings Prize (£2 2s.), presented by Mr. Ivor Jones, A.R.I.B.A., John P. Ward.

The Prize for Civic Design (£2 2s.), presented by Mr. T. Alwyn Lloyd, F.R.I.B.A., John P. Ward.

The Architectural Sketching Prize (£2 2s.), presented by Mr. H. Teather, F.R.I.B.A., Dd. W. Roberts.

The Architectural Construction Prize (£2 2s.), presented by Mr. H. Budgen, F.R.I.B.A., H. J. W. Lewis.

The Batsford Prize for Architectural History and Theory of Design (£2 2s.), presented by Messrs. B. T. Batsford, Ltd., H. J. W. Lewis.

The Sketch Design Prize (£2 2s.), presented by Mr. E. C. M. Willmott, A.R.I.B.A., Wm. H. Maton.

Prize for Draughtsmanship (£2 2s.), presented by Mr. Percy Thomas, O.B.E., F.R.I.B.A., Clifford Rosser.

Certificate in Architecture (carrying with it exemption from the R.I.B.A. Intermediate Examination), Herbert J. W. Lewis (with distinction), Frederic G. Allen, Cyril J. Fussell, Marjorie Murray, Sydney G. Roberts, Cenydd W. Williams.

Diploma in Architecture (carrying with it exemption from the R.I.B.A. Final Examination), John P. Ward (with distinction), Cyril L. Bugler, John Lewis, William H. Maton, Clifford Rosser.

The South Wales Institute of Architects, Central (Cardiff) Branch Prizes, Session 1930-31.—Designs: Second Year (£2 2s.), Cyril H. Francis; Third Year (£3 3s.), Frederick G. Allen; Fourth Year (£4 4s.), John T. Darch; Fifth Year (£5 5s), Clifford Rosser. Measured Drawings: £3 3s.) Cyril H. Francis; (£2 2s.) Dd. W. Roberts.

EDINBURGH ARCHITECTURAL ASSOCIATION.

Mr. F. W. Deas, who read a paper on "The Work of Sir Robert Lorimer" to members of the Edinburgh Architectural Association in the College of Art, Edinburgh, said that Sir Robert's temperament and outlook were romantic, not classic, and this natural bias was developed especially by his early association with Kellie Castle. His apprenticeship with Sir Rowand Anderson provided a solid foundation for his idealistic nature. His early work rather leaned to the English, but, even so, had always some Scottish tang in it. Gradually, and probably unconsciously, the influence of Kellie, Earlshall, and other typical Scots houses of the sixteenth century increased, and out of that he developed the modern Scots domestic style, which was one of his great achievements. In the Scottish National War Memorial, Lorimer's work was greater than the mere physical fact. To feel a world-wide sentiment and to be able to give it expression seemed an achievement transcending architecture as such, and for that reason estimates on purely technical grounds were probably better left for future generations. Even if no single one of Lorimer's qualities were held to be outstanding, yet the combination of the creative and the idealistic on the one side with the methodical and practical on the other must be allowed to be very rare, and to be exactly what was to be desired in an architect.

R.I.B.A.

At a Council meeting of the R.I.B.A. on November 30, the following were among members elected. In our last issue a printer's error was responsible for them being wrongly described :—

AS HON. CORRESPONDING MEMBERS :

Adalbert Berrich. C. H. Walker.

AS FELLOWS :

Capt. H. C. Asheden.
A. G. Bray.
J. J. Cresswell.
K. Dalgliesh.
F. Dowdeswell.
J. Emberton.
J. O'H. Hughes.
Miss Gertrude W. M. Leverkus.
A. D. Robinson.
B. L. Sutcliffe.
J. M. Venters.
J. B. Adams.
H. Anderson.
F. G. Drewitt.
F. Etchells.
L. B. Frank.
L. MacD. Gill.
W. J. King.
C. P. Martin.
E. Ranger.
J. Stewart.
J. Taylor.
J. Adams.
J. E. Bladon.
S. Denman.
Major J. F. Jackson.
W. Mawhood.
W. E. Moore.

"THE ROAD TO PROSPERITY"*

Amongst the many attempts that have been made to find a cure for the present industrial depression, we have for review a book which sets out to prove that a reduction in the present high wage basis is the only real remedy. The authors are fully aware that this remedy is one that is in the minds of many, merely as an idea, however, and only whispered lightly in privacy. The proposition which they develop is, that there are only two parties concerned with the production of goods—the employer and the worker, and that there is a point of equilibrium which allows the employer to employ and the worker to work. On the face of it this seems to be a self-evident proposition, if readers are prepared to cut away the mass of prejudices and side issues which seem to stand in the way of any clear conception of the simple issue which the authors present. They point out that the value of what is produced is always divided into wages, salaries and profits, and that an equitable division between these interests can be arranged.

There are two important factors which affect the whole argument. The question of the division of production—reckoned in money—is at once affected by price levels, and the scientific explanation of the movements in these levels, as pointed out by the authors, could be the subject of a whole book In a world-deflation of prices the employer cannot get his profit, so long as the worker rigidly maintains his cash wage basis. Clearly, therefore, the movement in price levels is the dominating factor in the equitable division between the employer and the worker. The position is put simply by the authors when they say that if prices could be controlled the employer would secure his profit at once, and industry would be on its feet. It is the employer who is crushed out of existence, and he, in turn, has thrown his workers on the list of the unemployed.

The other point, it must be confessed, is not so easy to understand. The authors are definite that the remedy does not lie in increased efficiency of production. Everyone must be aware by now that this is the remedy that is favoured by many leading industrialists as the only alternative to a reduction in wages. Efficiency *per se* is admitted by the authors to be a desirable objective, but it does not enable the employer to secure the profit he needs. It is pertinently pointed out that the country has been exploring this remedy for ten years, and that if efficiency contained the solution of industrial depression, America would today be enjoying a boom in trade, whereas her condition is as bad as ours, or worse.

If we accept these two main points—price levels and efficiency—there seems to be no doubt that the authors have submitted a coherent and consistent theory of working and living. They have cleared away an enormous amount of humbug responsible for so much of the sentimental economics of the last few years. In this respect it ought to be stated that the book is not a treatise upon political economy: it is written in simple language for those who make no pretensions to any specialised knowledge.

A fair summary of the authors' reasoning is that unemployment—to-day, at least—is a self-inflicted disease; it is an effect, and the whole fabric of industrialism has broken down because the employer is unable to exist. Unemployment is not a calamity that must be accepted; it is a disease that becomes chronic when we are determined to value our services at a figure that our neighbours cannot pay. The valuation of these services has not been adjusted to meet the world deflation in prices, and therefore the employer—unable to obtain a profit for his services—has been compelled to cease work.

The book is evidently written without any political bias or rancour, and the delicate question of wage reductions is discussed openly from the point of view of the welfare of the worker and the prosperity of the nation. The popular fear of a reduction in wages is explained in terms of cash wages and real wages, and it is argued that a reduction in the present high wage basis would actually result in an increased real wage, and a higher standard of living for the workers. In their survey the authors conclude with a warning that unless an agreed satisfactory division between employers and workers is arrived at speedily, the consequences for industrialism and the whole nation will be disastrous.

Students of architecture and sociology will welcome the chapter upon "Working and Living." In this, it seems to us, first things are placed first. All standards of living, whatever these may mean in the way of leisure or the amenities of life, are the result of our labour. They are earned, as they should be, in every healthy State. Or, to put it otherwise, the authors cannot accept an industrial and social structure which places the whole of its conditions first—as a first condition in life—and settles down complacently on the dole to look for the work which will never come. This line of thought carries a great deal of significance for all those who are interested in the building arts and those other arts that contribute towards the amenities and the full enjoyment of life.

It may be argued that the remedy suggested in this book is too simple, but on the other hand it is probable that this simple issue has been ignored all along merely because it appeared to be the most distasteful of all the popular remedies that have been suggested from time to time.

* "The Road to Prosperity. Unemployment—its Cause and Cure." By Percy Wallis and Arthur Redfern. London: John Lane, The Bodley Head, Ltd. Price: 3s. 6d. net.

LAW REPORT

Chancery Division.
Before Mr. Justice Clauson.

PERMANENT IMPROVEMENTS OR ADDITIONS. — CONSTRUCTION OF COVENANT.

Coxe v. Ward.

Mr. Evershed appeared for the plaintiffs and Mr. Sachs for the defendant.

Mr. Evershed said the question in the action was whether, on the facts and on the construction of the covenant in the conveyance of the property to the defendant, the defendant was liable to pay the plaintiffs for work a Mrs. Dodd had done to the property. The house was of some historical interest, and was a period manor and the home of the late Alfred Austin. Mrs. Dodd lived in the house till her death, and it then passed to the defendant under the conveyance of March, 1918, and under it the defendant undertook to pay for "permanent improvements and additions at a fair incoming value." Under the deed the late Mrs. Dodd was to remain in possession till her death, which occurred in 1930. It was during that period that Mrs. Dodd carried out the improvements for which the plaintiffs now claimed. Counsel submitted that the expenditure she made between 1918 and 1930 was recoverable. Mrs. Dodd discovered damp in the morning room, and she had the floor up, and, after having the brickwork attended to, she laid down a concrete floor. The drains were also in need of repair, and Mrs. Dodd had a new system laid down under the direction of Sir Reginald Blomfield. She also carried out other improvements. Counsel's contention was that these works were "permanent improvements and additions," and were recoverable from the defendant at a fair value.

The defence was that the works executed were not permanent improvements or additions within the meaning of the clause, and a denial that the fair value to an incoming tenant was £250. Whilst denying liability, defendant paid into Court £75 in satisfaction of the claim.

His lordship, in giving judgment, said in 1918 Mrs. Dodd was possessed of Swinford Old Manor and other property. The old manor possessed considerable literary interest. Mrs. Dodd gave a considerable sum for the estate. She contemplated selling the Old Manor, but desired to retain possession during her lifetime. She eventually carried out her intention to sell, and executed a deed under which she conveyed the property to Mrs. Ward, she (Mrs. Dodd) to remain in possession during her life. That deed contained the covenant in dispute in the case. It was agreed that it meant that the purchaser should pay whatever was to be paid to the vendor or her estate. Mrs. Dodd survived till 1930

It appeared that in 1919 there was trouble as to damp, and Mrs. Dodd carried out certain work to the morning room and elsewhere in the house, and she also, among other things, had the drains relaid. At her death her personal representatives made a claim for £250 in respect of the work, contending that that work was permanent improvements and additions.

Dealing with the evidence, his lordship said Sir Reginald Blomfield had stated that it was necessary to do work to the morning room and to put in a fresh system of drainage. Sir Reginald considered the work was a permanent improvement. Mr. Head, an architect and surveyor, had also given evidence for the plaintiff.

For the defence, his lordship said he had had the advantage of hearing Mr. Burrows, a very experienced land agent and surveyor and valuer, of the well-known firm of Knight, Frank and Rutley, who had special experience in this part of England. In Mr. Burrows' view, the work had to be considered in the light of whether extra rental could be obtained, and he thought that perhaps £3 might be secured, which equalled about £50 in capital value. He added that an owner who put in work of this kind would get very little, if any, return.

Proceeding, his lordship said he had to consider whether the plaintiffs had made out their claim to the figure they set up. He did not think that this work was the work which the parties had in mind at all when the covenant was entered into. This work was maintenance work necessary for the fabric, and that only. In his view, the parties had in mind something which, after the lapse of years, would have some value to the incoming tenant. The plaintiffs had put forward a claim they had not succeeded in proving. They had wholly failed to prove that the works here came within the covenant, and he dismissed the action with costs.

The defendants would have out of Court the £75 they had paid in with a denial of liability.

INSTITUTION OF MUNICIPAL AND COUNTY ENGINEERS.

In view of the largely increased administrative demands upon municipal and county engineers, the Council of this Institution have decided to introduce questions on administration and organisation into the Testamur Examination, and also to inaugurate a Diploma in Administration, for which a special examination will be held. Part VI of the Testamur will henceforward consist of a three-hour paper divided into two sections: (1) Law and By-Laws; and (2) Administration and Organisation. Part IV of the County and Highway Engineering Examination will be similarly divided.

The Institution will not in future conduct a separate examination in Town Planning; its Town Planning Certificate will be awarded on the results of the examinations conducted by the Joint Town Planning Examination Board, of which the Institution is a constituent body. The first examination of the Joint Board will be held in July, 1932. The examination regulations and syllabus, revised to include the above changes, may be obtained from Mr. C. W. Scott-Giles, secretary.

ARCHITECTS' & BUILDERS' INQUIRY BUREAU

QUESTIONS.

Weather Boarding.

SIR,—I should be glad to be advised whether deal weather-boarding creosoted under pressure is considered equal to elm or oak in lasting properties.

CONSTRUCTION.

Concrete Roads.

SIR,—I am anxious to get in touch with the makers of a type of concrete road construction comprising a series of pre-cast shaped blocks through which rods are driven to interlace the units prior to final grouting. I should be glad of assistance in the matter.

SURVEYOR.

Damp Rot in Bungalow.

SIR,—A bungalow seven years old has developed damp rot underneath the front bedroom and drawing-room. There are plenty of air gratings and a space of 4 ft. between the floor boards and the ground. We had more air gratings put in, and all the woodwork had a coat of tar, and this has cured the front bedroom. There is still a small trace of the damp rot, in the form of a wet fur or mushroom substance, which clings to the brickwork of the front wall, as though some germ had come out of the crevices in the bricks. There is a trap-door in the floor of the drawing-room, and it is possible to move about in the space below with freedom.

Would you recommend the application of mercurial compound for the damp rot, or is there anything else that would kill the germ? A lecturer at the Technical College, in Leeds, suggested spraying with hydrochloric acid, or burning with painter's blowlamp the face of the bricks under the floorboards. J. M.

Extras Ordered Without Client's Authority.

SIR,—The reply to "Builder," August 28, given on page 396, appears absolutely to be contradicted by Mr. W. T. Creswell in his admirable articles on the New Form of Contract, page 499, September 25, where he cites three cases in support of his definite statement that the client is not liable to pay on an architect's certificate for works which the architect may have ordered by way of extras without the client's authority.

Am I to understand that under the New (1931) Form of Contract the architect no longer has the authority (conferred on him by the 1909 Form) to order extras for which the client is bound to pay? This leaves the architect liable to the contractor for all and any extras which may occur during the progress of the works, if, inadvertently, he has not received sanction from the client.

If so, another (and a most alarming) is added to the many serious responsibilities with which the architect is saddled, to say nothing of this arrangement being grossly unfair to the builder.

Also, will Mr. Creswell tell us why there is no provision in the New Form of Contract for the bankruptcy of the contractor, although that of the employer is fully covered? PERCIVAL M. FRASER.

*** [We believe the new contract, as before, protects the architect as long as he goes no further in ordering extras than is comprised in the contract as in the scope of his authority, and if a contractor does execute an order of the architect, it is "up to" the contractor to find out whether the order is within the scope of the architect's authority.

It is true the bankruptcy of the contractor is not specifically mentioned, but if the contractor does commit an act of bankruptcy, Clause 22 is put into force and the employer may determine the contract.

Mr. Fraser might read Article VII. on the Powers of the Architect, published by *The Builder*, by Mr. Creswell; also Chap. XVII of his book on Building Contracts.—ED.]

ANSWERS.

Water Pipes.

[ANSWER TO "SPECULATOR," DECEMBER 11.]

SIR,—Lead is almost everlasting, but liable to burst in frost, and under some water is soluble and apt to convey lead poisoning. Galvanised iron resists bursting by frost to some extent, and is strong and does not sag under its own weight. With some waters, however, it corrodes rapidly. The different demands of water companies is a question of the chemical composition of the water of the area.

PLUMBER.

Builders' Profit on Extra P.C. Items.

[ANSWERS TO "PUZZLED," DECEMBER 11.]

SIR,—If your correspondent can produce the schedule figures of his tender showing a rate of profit added to P.C. amounts, he is entitled to charge the same rate of profit on the extras over the P.C. amount. If, however, he has added nothing to the P.C. amounts he cannot claim anything on the extras. SCHEDULE.

SIR,—If to the total p.c. items of £190 in the three contracts referred to there were, in fact, added to the p.c. amounts included in the lump-sum prices anything in respect to profit, fixing or carriage, etc., then similar additions should be claimed to the extra p.c. amount of £100, and can be recovered.

PROFIT.

Drainage Connection.

[ANSWER TO "COUNTRY," DECEMBER 11.]

SIR,—The power of a local authority to enforce drainage of undrained houses is obtained from section 23 of the Public Health Act, 1875. A covered drain or drains must empty into any sewer which the local authority is entitled to use, and which is not more than 100 ft. from the site of the house. Further, the local authority can require any drain or drains to be of sufficient materials and size and to be laid at such level and with such fall as may be necessary; also, if a notice from the local authority is not complied with, the local authority may do the work required and recover in a summary manner the expenses, etc.

It follows that if "Country" is sure of his facts, namely, that the sewer is at such a level that the drainage cannot discharge into it, then he should do nothing more than allow the local authority to take action as above, if it so determines. If it does take action he should seek legal advice before going further. LEX.

Licensing Question.

[ANSWER TO "PLANNER," DECEMBER 11.]

SIR,—(1) Licensing Justices. (2) Local Excise Officer. (3) Licensing Justices. (4) Ditto. (5) County Council.

Question of Contract.

[ANSWER TO "NORTHANTS," NOVEMBER 27.]

SIR,—In common with many other users of your Inquiry Bureau, "Northants" does not give all the necessary information. The vital matter here is the form of contract used. The only hints conveyed are the reference to Mr. Creswell's valuable articles (pointing to the New Form) and the account of the methods adopted by the architect, which seem to indicate that either the New Form or the R.I.B.A. 1909 Form is here used.

Assuming either of these to be used and that quantities form part of the contract in the ordinary way, then the architect, though adopting an unusual course, is within his rights. These forms provide for rectification of errors in quantities, and the architect may, of course, search for them for that purpose. If the quantities were taken off by a qualified surveyor in the first place, the results are not likely to be disquieting, but if "Northants" fears that they will hit him hard, it would probably be wise to get a surveyor to act for him. T. J.

THE WEEK IN PARLIAMENT

WESTMINSTER.

Housing Policy.

SIR E. HILTON YOUNG, dealing with housing policy, said that nobody was going to pretend that at the present time the housing situation did not need measures of remedy and relief, but it was not turning their eyes in the right direction to ask them to look for greater interference by the Government. What the housing industry and housing accommodation was suffering from was not too little Government interference, but too much. He could not accept the assertion that the local authorities had abandoned their housing programmes to the extent of £33,000,000. One of the first inquiries that it was necessary for him to make was an inquiry into the present activities of the local authorities with regard to the housing situation. As a result of that inquiry he was confident that there would be more employment on assisted housing this winter than there was last winter. There was no need whatever at the present time to impel local authorities to any additional activities. There was a reasonable activity on their part, and there was no actual sign of any reckless abandonment of reasonable programmes of housing.

With regard to the announcement of the Prime Minister that there was to be legislation to enforce the general recommendations of the majority of the Departmental Committee on rent restrictions, details of those proposals would be introduced in due course. He had only time to mention one or two of the leading principles of the Bill. First of all, it was an ascertained fact that there was a serious shortage, unremedied, of the smallest type of houses to be let to the working classes. It was generally recognised that the process of decontrol of that type of house was causing acute and unnecessary grievances. It was also recognised that private effort, with public assistance, but principally private effort, had already succeeded in getting well forward with the supply of houses of the larger type, and that the best work for the industry was to be done by releasing a larger area, as it were, of that type of house to be supplied by private enterprise, having a free field to itself. Those were the general lines of the Bill. But everyone would recognise that that outline of policy would not be complete unless it was coupled with the proviso that when they were perpetuating control of the smaller houses, they must couple with that a concentration of effort to build the houses by means of subsidy.

Rural Housing.

CAPTAIN ERSKINE-BOLST asked the Minister of Health if he would state the number of houses constructed or reconditioned, respectively, with financial aid from the State in the rural areas of the country in each of the last three years.

SIR E. HILTON YOUNG said that the following statement showed the desired particulars for rural districts in England and Wales:—

	Number of Houses:—		
	Constructed with State assistance under:—		Reconditioned with
Year ended Sept. 30.	Housing, etc., Act, 1923.	Other Housing Acts.	State assistance.
1929	18,093	5,294	1,059
1930	---	5,916	1,201
1931	—	8,564	1,445

Financial assistance under the Housing, etc., Act, 1923, was not available in respect of houses completed after September 30, 1929.

Imported Granite.

MR. BURNETT asked the value of the imports of manufactured granite, monumental and architectural, for the months of August, September and October, 1931.

MR. HORE-BELISHA said that during those months the total declared value of the imports of monumental and architectural granite into the United Kingdom amounted to £21,371, £19,460 and £21,201 respectively.

THE BUILDING TRADE

ESTIMATING: SOME HINTS AND DATA—XXV

By J. R. TAYLOR.

CAVITY WALL COSTS.

"Extra value only (over common brickwork) for forming 2 in. cavity in outer walls, and include for providing not less than four galvanised wrought-iron ties (described) per yd. super, and for keeping the cavity clear (by means described) as the work proceeds; per yd. super, so much." An item in some such words as these will be found in most bills of quantities dealing with domestic buildings, and in some instances is followed by another reading: Feet lineal: "Allow for building bricks with dry joints to each alternate brick along the bottom course of outer wall of cavity; on completion of the brickwork, clean out all mortar droppings from bottom of cavity and reset these bricks in mortar and point to match other work."

These are not at all easy to price, as on all but the very best class of work the first difficulty that faces the estimator is that of interpretation. That is why I write "very" best, though best is a superlative. If the architect, by himself or through his clerk of works, or the builder on his own initiative, makes any real effort to see that the cavities are kept free from droppings, the cost will be considerably higher than usual. In this connection a reader has written to me as follows:—

"I spent a good many years supervising as clerk of works the erection of high-class buildings under architects, such as —— and ——, and it was my experience that even with daily inspection it required almost superhuman effort to ensure that all the necessary care was taken in the construction of cavity walls to prevent the defects which lead to failure, and, of course, if this work is done as thoroughly as it should be, it is expensive."

But before trying to arrive at the cost of keeping the cavities clear, there are several other points that need to be dealt with. The Standard Method of Measurement of Building Works lays down the rule that, whereas brickwork generally shall be given in rods, half-brick walls shall be measured separately and given in feet or yards superficial. Later it goes on to describe the methods of measurement to be applied to hollow walls; but let us first of all consider the reason why half-brick walls are taken separately. Built separately, they may be assumed to use up less mortar proportionately than one-brick walls because of absence of vertical joints between inner stretcher faces, and if this were the only consideration they would be measured separately in order to secure a reduction in value. But the real reason for so taking them is that half-brick walls take proportionately longer to build because the bed cannot be spread so easily and rapidly, and the surplus mortar squeezed out when the bricks are laid has to be scraped off at both sides with the edge of the bricklayer's trowel. This scraping off is a very simple matter when access to the face is free, but it is quite another thing when there is only room for the point of the trowel instead of its edge, and it is not at all surprising that so much mortar does drop into the cavity. A bricklayer does not use his trowel as we use a knife when spreading butter, but picks up these scrapings with the edge and parts with them by depositing them on the next bed with a slight jerk. In building up the price, therefore, the first consideration is, what is the true extra value of half-brick over one-brick work; and the next is, whether it is more or less costly when executed in cavity walls than in, say, partition walling. If it were not for the slowing up that takes place where any care is used to minimise the amount of droppings, it would be cheaper in cavity work because, both walls being so close together, they can be built off one scaffold and with less movement. But they never should be built by a bricklayer working from only one scaffold if it is desired to keep them reasonably clean. The outer skin should be built up, say, three courses, or to the next row of ties, so that the protruding mortar can be more easily dealt with, and the backing up be followed on by another bricklayer working from an inside scaffold. Or, when it is considered that the inner skin generally takes the greater load, some may prefer to reverse the order and get that up first; the point is that both skins should not go up course by course simultaneously. We have, therefore, to fix on a labour constant, and as this will vary with the amount of care used, I propose to leave the reader to decide that for himself. The next matter is to value the ties, and the following are catalogue prices at per thousand ties of the descriptions most commonly stocked. Being subject to discount, the prices may be taken to cover the cost of handling.

Butterfly Pattern.—8 in. by No. 9 gauge solid galvanised wire, 35s. 3d. per M.; 8 in. by No. 9 gauge galvanised after making, 58s. 9d. per M.; 9 in. by No. 8 gauge solid galvanised wire, 42s. per M.; 9 in. by No. 8 gauge galvanised after making, 75s. 3d. per M.

Split and Twisted Hoopiron.	s.	d.
8 in. by ¾ in. by $\frac{1}{16}$ in. self colour ...	60	2
9 in. by ¾ in. by $\frac{1}{16}$ in. do. ...	68	9
8 in. by ¾ in. by $\frac{1}{16}$ in. blacked ...	64	7
9 in. by ¾ in. by $\frac{1}{16}$ in. do. ...	73	8
8 in by ¾ in. by $\frac{1}{16}$ in galvanised ...	90	8
9 in by ¾ in. by $\frac{1}{16}$ in. do. ...	103	7

The highest price here quoted represents about 5d. per yd. super, but whether forty years' security can be purchased so cheaply is another matter. It is nearly impossible to put a value on the use of cores, and on the great majority of jobs it is altogether unnecessary because they are hardly ever used. I make a practice of asking every bricklayer I meet where and on what occasion he last saw either haybands or wooden rules used as cores in cavity walls, and though now and then a very old stager can remember seeing them on a job, he is not, when pressed, ready to affirm that they were other than ornamental. Like pargetting to flues with cowdung, their most useful purpose is to make void the risk of losing marks in an examination paper. There may be districts where a carpenter attends on the bricklayers and starts off with full length rules at the bottom, cuts them to fit between air bricks, lengthens them until sills are reached, shortens them between sill ends, and so on until gable tops are reached, but if so I am sure that the work must be carried out on a cost plus percentage basis. As for hay or straw bands, it seems to be forgotten that bricks vary a little in width, particularly those used for inside work; that cavities continue round external and internal angles; and that consequently there would be many accidental disturbances of green work.

There are still one or two points to which it is necessary to direct the young estimator's attention before leaving him to set down a price. Let him watch a good bricklayer make good a putlog hole. The first thing the bricklayer does is to clean out all loose mortar carefully; next he splashes water into the hole; then he takes a trowelful of mortar and throws it at the back of the hole, and works some of it down on to the bottom bed; after that he takes his brick and butters the top bed and about halfway along one end; he has plastered the end of the hole to receive the other end; he then carefully forces the brick into place, relying on the mortar previously thrown to the back of the hole to squeeze forward under pressure and fill up all voids. But a putlog hole in a cavity wall cannot be so treated, and if the bottom bed is fully laid with mortar, some of the mortar is bound to be pushed into the cavity. If it is not fully laid, the new brick introduced tends to slope slightly down towards the back, and a fall is provided on the loosely packed top bed. The making good to holes round outgoes of soil pipes, bath, sink and lavatory wastes will, when quantities form part of the contract, be given separately, but I mention them here because they are even more difficult to deal with satisfactorily than the putlog holes.

We have now dealt with some of the considerations to be weighed when pricing the first item mentioned—the extra value from cavity, etc.—but I cannot tell the young estimator what amount to put down. If there is much of it, and he prices it at what it is really worth, it may mean that he just loses the job. If he puts down less, he may lose money if the work is carefully carried out. But it seldom is properly carried out.

The cost of the next item—clear cavities—will vary with the amount of mortar that has fallen clear of the wall ties. A good deal will fall and lodge on the ties, as anyone who has ever seen a cavity wall opened up will know full well. That which has fallen from the trowel may be set hard and difficult to move; but a good deal of it may be loose and dry by reason of having been dislodged from the wall ties or as the result of plugging for joinery fixings. Probably a bricklayer and labourer would clean out and make good at the rate of 50 ft. a day.

In an earlier article (*The Builder*, October 3, 1930, page 581) I dealt with many other points bearing on the true cost of cavity walls when consideration was given to all the additional work and material that is involved round window and door openings and other matters. But as I once saw a letter published, in which it was stated that architects found builders ready to build houses with cavity walls at little or no extra cost over houses with solid one-brick walls, it appears to be worth while to refer briefly to that statement. Its accuracy turns on the question how the house is measured, because for obvious reasons the general finish must be exactly the same in both cases before a serviceable comparison can be made. To find the true comparative additional cost of an 11 in. cavity wall over a one-brick solid wall, it is necessary that they should each be deemed to enclose an exactly similar amount of floor space. Assume the ground-floor space to be enclosed to be 600 ft. super (30 ft. by 20 ft.), and a similar amount for first floor. With solid walls the outside perimeter of the building would be 106 ft., whereas the cavity would increase this to 107 ft. 4 in. This addition to brickwork content is not very important when it is remembered that the absence of headers will make ample compensation in regard to cost of extra only facings. But there is the closing-up of cavities, which is an expensive matter when properly done, and, when not properly done, a constant source of trouble and expense. The door and window openings are now 11 in. through from face of brickwork to face of brickwork, and the accumulated costs of extra width of sills or window bottoms, plastered reveals or wood linings, heads or lintols, dampcourse over last, represent in the aggregate a not inconsiderable sum; and, in addition, more roofing timber, roof covering and eaves gutter will be required.

If, on the other hand, the overall external dimensions are to remain the same, there will be an actual saving of brickwork on the inner skin of external wall, a further saving on partition walls, less flooring, less plastering, and so on; and the value of these savings can be set against some part of the cost of forming cavity. How far they will go entirely depends on the quality of the cavity and its finishings, and the quality and finish

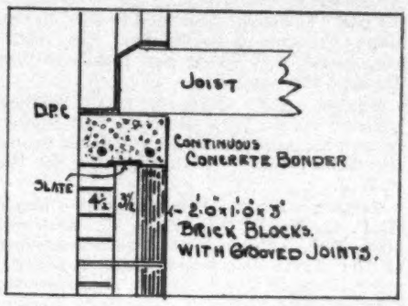
of the items set off. But the total loss of floor space will exceed 33 ft., which in most small houses would make all the difference between comfort and discomfort, if, say, given to or taken from a stairway and entrance lobby.

I must not be thought to deny that cavity construction has advantages. On the contrary, I hold that even a not too well-built cavity offers a certain amount of protection on the weather side of a building, which is particularly valuable where the facing bricks used are of a porous character. What I do say is that, carried out really well, the cost is much higher than it is usually thought to be, and that, as usually executed, the still unavoidable additions to first cost are high in comparison with other methods that give at least as good, and probably better, average results. Further, what protection a cavity does give is obtained by a sacrifice of structural stability, and instances of failure under wind pressure are not wanting.

During the past year I have noted that certain authorities whose business it is to design and maintain small single-story buildings, many of which are erected in very exposed situations, have made a slight but important change in the method of construction. The buildings usually consist of only one room, but for technical purposes that room must be dry. Formerly they were built with 11 in. cavity walls in the ordinary manner, and had overhanging eaves. The mortar used is cement, 1 to 3. The standard drawing has been revised from time to time as the result of experience gained.

The most recent method adopted is to substitute hollow brick partition blocks for the inner half-brick skin, and, as these blocks are 3 in. thick, this widens the cavity to 3½ in.. The bricks to outer wall are selected to a size that will run four courses to one block, and the outer walls are carried up four courses all round before a course of blocks is fixed. This enables the bricklayer to clean his inside joints. Then the ties are placed and a floorboard is laid flat across the cavity, and the next four courses of outer skin are built. Very little mortar is needed for jointing the keyed blocks and a clean cavity results. On completion the bricks are given several coats of waterpaint, which looks quite well in rural surroundings and does much towards better weather protection.

Small domestic buildings might well be constructed in a similar manner and have the walls carried up to, say, 6 in. below first-floor joists; then close the cavity with slates and a concrete band course, as sketch, which



would stiffen up the construction generally. Another way would be to oversail the second story walls on several courses of pre-cast concrete slabs laid in mastic. A suitable mastic can be made by roasting sand so as to get it perfectly dry, adding Portland cement and mixing to the consistency of glazing putty by the addition of linseed oil.

THE BUILDING RESEARCH STATION

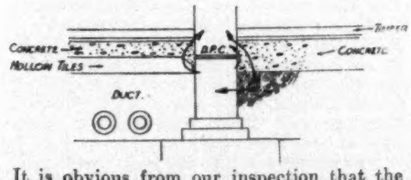
QUESTIONS AND ANSWERS.*

[The following abstracts of inquiries represent a number of those recently submitted to the Building Research Station. The information given in the replies quoted is based on available knowledge. It has to be borne in mind that further scientific investigations may in the course of time indicate directions in which the replies might be supplemented or modified. Moreover, the replies relate to the specific subject of each inquiry, and are not necessarily suitable for general application to all similar problems.]

A Damp Wall Problem.

The architect for a block of recently-erected flats requested the assistance of the Station in tracing the cause of dampness in a wall in one of the apartments on the ground floor.

Reply :—An inspection carried out at the building by an officer of the Building Research Station showed that on one side of the affected wall was a solid concrete floor finished with wood bearers and flooring, while on the other side was a pipe duct with a hollow tile and concrete cover also finished with wood bearers and flooring. A sketch showing the construction is reproduced.



It is obvious from our inspection that the trouble is most probably due to the capillary rise of ground moisture at the point where the concrete is in contact with the wall above the dampproof course; the arrows on the sketch indicate the manner in which it is thought that the moisture is rising. It is, perhaps, not generally realised that even a dense, well-made concrete may not be a barrier to the capillary movement of moisture, although the amount actually transmitted may be small.

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The fact that one flat alone is affected may be the result of some peculiarity in the distribution of ground moisture on the site; in this connection it is observed that the corner of the building where the flat is situated appears to be at a rather lower level in relation to the general ground level than the rest of the building.

To prevent the rise of moisture in the walls it will be necessary to provide a vertical dampcourse; this might be satisfactorily accomplished by cutting a chase in the concrete adjoining the wall to a depth sufficient to leave the full thickness of the dampproof course exposed, and filling up the chase with hot bitumen. With the construction as carried out the floor timbers are also liable to become saturated with moisture, a condition very liable to result in an outbreak of dry-rot, and it would be advisable to introduce some form of insulation between the timbers and the top surface of the concrete. A bitumen coating would probably provide satisfactory insulation from moisture, but to be effective it would be necessary to ensure that the layer of bitumen over the concrete is continuous.

Watertightness of Brickwork.

An engineer inquired about the comparative watertightness of brickwork built in lime mortar and cement mortar.

Reply :—Throughout recent literature there have been numerous references to this subject; for example, a summary of investigations carried out at the Mellon Institute of Industrial Research (America) is given by F. O. Anderegg in the American "Architectural Record" of September, 1931. In this article it is pointed out that lime mortar has greater "flexibility" than cement mortar; the latter imparts rigidity to a structure, but this in brickwork is unnecessary and may be harmful, since cracking is more liable to occur. Lime mortars, however, are more absorbent than mortars containing cement and are less weather resistant. Percolation of moisture through brickwork seldom occurs in the first place through the body of the brick or through the mortar, but more often by way of depressions in the mortar surface in contact with the bricks, caused, apparently, by incomplete wetting of the brick by the mortar, or by too rapid moisture removal while the mortar is still plastic. Since the erection of a watertight brick wall is well-nigh impossible because of the human element involved in bricklaying, it is advocated that in exposed situations cavity construction, the use of hollow building units, or the erection of furred-out internal renderings should be adopted. Mention is also made of a school of thought which advocates the use of materials permitting comparatively easy absorption, and, consequently, quicker evaporation, precautions again being taken to insulate the internal renderings from the body of the wall. It is suggested by the investigator that the most suitable all-round building mortar is a lean, lime mortar gauged with cement and containing a clean, well-graded sand.

From the limited number of experiments carried out to date at the Building Research Station there is some evidence generally that brickwork in which a moderately hydraulic, lime-sand mortar has been employed is rather more resistant to water-penetration than that in which a cement-sand mortar has been used. The first penetration in either case has been observed to occur at the bottom of the vertical mortar joints.

Recurring Rot in Timbers.

A firm of building contractors was called upon some time ago to replace a wood floor where an outbreak of rot had been discovered. The floor was of wood flooring boards on sleeper joists resting on a sleeper wall, and was ventilated in the usual manner by air gratings in the outer walls and openings in the sleeper wall; the centre portion of the floor was covered with carpet and the room had a linoleum surround. The decay was confined to the section of the floor adjoining a party wall having a projecting chimney breast and hearth walls. Although every precaution against a recurrence of the trouble was taken, the rot broke out again in the new timbers.

Reply.—Trouble of this kind is by no means uncommon, and it is considered that it is primarily due to a lack of efficient ventilation in the recess formed by the projection of the chimney breast and hearth. In a serious outbreak of dry rot recently investigated by the Station, and where some hundreds of houses were affected, it was found that in nearly every case the rot had commenced in exactly the position described in this instance. The remedy in a case of this nature lies in the provision of an air passage under the hearth to avoid the formation of a stagnant air pocket in the recess. The insertion of a 6 in. drain pipe under the hearth will probably effect considerable improvement.

The use of linoleum frequently gives rise to trouble of this kind, since it is so impermeable that any condensed moisture is unable to evaporate into the air of the room. If in this case it were possible to dispense with the linoleum surround where moisture conditions are troublesome, this would be highly advantageous. The subject of dry rot in wood has been dealt with comprehensively in Forest Products Research Bulletin No. 1 (H.M. Stationery Office, price 1s. 6d. net), and it is suggested that this publication may be found helpful. In renewing the timber where there has been an outbreak of dry rot, it is particularly desirable to apply a preservative treatment to the new wood. Thorough impregnation with the preservative is to be recommended as brush-applied coatings have been known to fail to prevent further infection.

Corrosion of Lead Pipes Embedded in Clay.

A firm of builders engaged in the development of a housing estate had experienced repeated failures of lead water-supply pipes embedded in a virgin clay soil. In each case the pipe was found to be severely corroded, in some instances to the extent of the full thickness of the wall of the pipe. A section of the corroded pipe was submitted by the builders, together with a request for the opinion of the Station on the

probable cause of the corrosion and a note of any preventive measures which could be taken.

Reply.—An examination of the corroded pipe showed that the corrosion product was of the lead carbonate or white lead type—that is, of the kind produced by the action of organic, acidic substances on lead. In certain soils, such as peaty soils, clays containing comparatively high proportions of organic matter, and made-up ground containing coal residues, serious corrosion of embedded lead is liable to occur, the organic acids contained in these soils acting on the lead and resulting in the formation of lead carbonate. Apparently in this instance the clay soil in which the pipes were embedded contained sufficient organic acids to corrode the lead seriously; several instances of this type of corrosion have previously been reported to the Station.

Since it is obviously impossible to expect the normal life from lead pipes embedded in this clay, the insertion of some form of insulating medium between the pipe and the soil seems advisable; to pack round the lead pipes with chalk, limestone, or old, well-carbonated mortar would probably give beneficial results, though at future renewals it might be better to lay the pipes in wood troughs and fill in with bitumen or tar, or, again, the use of felt strips impregnated with bitumen and wrapped spirally round the pipes would probably provide adequate insulation.

Much useful information regarding the causes of corrosion of lead in buildings and its prevention is contained in the Building Research Technical Paper No. 8 "The Corrosion of Lead in Buildings," and Building Research Bulletin No. 6, "The Prevention of Corrosion of Lead in Buildings."

Putty for Glazing in Steel Sashes.

An architect has been experiencing trouble with the putty used for glazing in steel sashes. His specification called for a genuine linseed-oil putty, and, although he could neither find fault with the quality of the putty used nor with the workmanship, the putty on some of his recent work had failed to harden and presented a rippled appearance. He inquired whether it was possible to suggest the cause of this trouble and how to overcome this deficiency in future work.

Reply.—It is known that in certain cases additions are made to putty to prevent hardening, particularly where large individual panes are glazed, or where considerable temperature movements are to be expected. It is possible that a non-hardening putty of this type had been used on the work. Alternatively, the use of an excessive quantity of linseed oil would result in a soft putty for which the normal small amount of hardening in the form of a surface skin would be inadequate, particularly in steel sashes, since with these there is no absorption of the oil as in the case of wood sashes. The addition of gold-size is sometimes made to increase the rate of hardening of a putty; though its use may be quite effective in this respect, its inclusion increases the shrinkage of the putty, and the practice is one which cannot be recommended.

For use in metal frames, the addition of a hardening agent to a putty is desirable. White lead and red lead are often used for this purpose, and a good putty for glazing in steel sashes can be made by adding about 10 per cent. by weight of one of these substances to ordinary linseed-oil putty, the desired plasticity being restored, if necessary, by a small addition of turpentine. If this mixture is used at a fairly stiff consistence—rather stiffer than that ordinarily used for glazing in wood frames—and the metal frames have been painted at least a few days previously, good adhesion, and satisfactory hardening should result. After a few days the putty should receive one or two coats of paint to give a surface hardness, and at the same time to prevent excessive hardening of the underlying putty.

NEW BUILDINGS IN LONDON

The Editor would be glad to receive information for publication under this heading from architects, builders, or other persons concerned. Items should be received at THE BUILDER *Office not later than Monday morning.*

Bermondsey.—FLATS.—The B.C. has approved the sketch plans for the erection of 42 flats and six shops in block No. 2, Odessa-street area. The cost is estimated at £26,000.

Bermondsey. — REBUILDING. — Messrs. Snelling & Rayment, builders, 282, Mitcham-lane, S.W.16, have secured the contract for demolishing the "Little Crown" beer-house, Albion-street, and erecting new premises on the site. The work is for the brewers, Messrs. Mann, Crossman & Paulin, Ltd., 220, Whitechapel-road, E.1, whose own architects have prepared the plans.

Brixton Hill.—BUILDING.—No building contract has yet been let for the new engine-house which is to be erected at Brixton pumping station, Waterworks-road, S.W., for the M.W.B.

Camden Town.—REBUILDING. — Major H. P. G. Maule, F.R.I.B.A., 12, Stratford-place, W.1, is the architect for the rebuilding of the Royal Veterinary College, College-grove, Camden Town, N.W. No contracts have yet been placed.

Cavendish-square. — ALTERATIONS.—Extensive alterations are being carried out to 33, Cavendish-square and Phœnix-yard, W.1, for use as offices and showrooms. The builders are Messrs. G. W. Higgins and Sons, Ltd., 34, Connaught-street, W.2, and the architect is Mr. Lionel Barrett, A.R.I.B.A., 6, Vere-street, W.1.

Chiswick.—ALTERATIONS.—For alterations and additions to the garage and workshops at the River Depot, Corney-road, Chiswick, the Brentford and Chiswick U.D.C. are inviting tenders. Mr. E Willis, engineer, Town Hall, Chiswick, W.4, has prepared the plans.

Cornhill.—IMPROVEMENTS.—We understand that the Rector of St. Edmund the King and Martyr (the Rev. the Hon. J. G. Adderley) has received £12,500 from Barclays Bank for land required for the improvement of the bank premises between Cornhill and Lombard-street. Of this amount £7,500 is being used for the restoration of the church. A chapel is to be erected to the memory of the Rev. G. Studdert-Kennedy.

Ealing.—ADDITIONS.—Messrs. Davis, 51, Boston-road, Hanwell, W 7, are carrying out to plans prepared by Mr. R. J. Ward, 107, Uxbridge-road, Ealing, W.5, alterations and additions to 12, Osterley Park View-road, for the Fresh Air Hand Laundry.

Ealing.—FLATS.—A lay-out plan for flats in Uxbridge-road, Ealing, has been prepared by Mr. R. G. Cox, 60a, Broadway-chambers, High-street, Acton, W.3. No building contracts have yet been placed in connection with this work.

Ealing.—HOUSES.—Plans have been sanctioned by the T.C. for the erection of 132 houses in four different roads in the borough, for Mr. A. Graham. The architect is Mr. W. Thorpe, 1, Cheapside, Hale-lane, Edgware.

Ealing. — REBUILDING. — The Cannon Brewery, Ltd., 160, St. John-street, E.C.1, are to have their premises, "The North Star," The Broadway, W.5, rebuilt. The architect is Mr. W. L. Eves, F.R.I.B.A., 54, High-street, Uxbridge, who is now preparing sketch plans for the work. No building contracts have yet been placed.

Ealing.—SHOPS.—Messrs. North, Robin and Wilsdon, architects, Townsend House, Greycoat-place, S.W.1, have prepared plans for the Central Commercial Properties for the erection on the site of 18-22, Sandringham-parade, five shops and ten flats. Messrs. George Moss and Sons, Ltd., Belvue Estate, Northolt, are the builders.

Hammersmith.—REBUILDING.—The B.C. have approved as housing authority only, revised plans in respect of the proposed rebuilding of the "Hope and Anchor" public-house, Waterloo-street, W.6.

Hendon.—HOUSES.—The tender of Messrs. S. Shaw, Ltd., 36-40, Glasshouse-street, W.1, has been provisionally accepted by the Hendon R.D.C. for 26 workmen's houses at Stanmore. The tender price is £7,142.

Kenton.—HALL.—Plans for a Catholic church hall in Kenton-road have been prepared for the Westminster Diocesan Trustees.

Lambeth. — WAREHOUSE. — Messrs. Hall, Beddall and Co., Ltd., Pitfield Wharf, Waterloo Bridge, S.E.1, have secured the contract for the erection of a new warehouse in Meadrow, Lambeth, S.E.1, for Messrs. John Oakey and Sons, Ltd., of Wellington Mills, S.E.1. The architects are Messrs. Parr and Sons, New Broad-street House, E.C.2.

Lower Mortlake-road. — REBUILDING. — Messrs. F. J. Fisher and Son, architects, 35, John-street, E.C.1, have prepared plans for the rebuilding of the "Bricklayers' Arms." No building contract for this work will be placed till after Christmas.

Lower Mortlake-road. — REBUILDING. — Messrs. Truman, Hanbury, Buxton and Co., Ltd., brewers, 1, Brick-lane, E.1, are rebuilding "The Crown" public-house. Mr. A. E. Sewell, architect to the company, has prepared the plans.

Morden.—CHURCH.—The Church of England Authorities have purchased a site on the fourth section of St. Helier estate, for the erection of a church.

Morden.—CHURCH.—We understand that the Building Committee of St. Peter's Church, Morden, has accepted a tender from Messrs. Woolridge and Simpson, of Oxford, for the building of the first portion of the Parish Church. The cost of building this first portion will be about £13,000.

Mortlake.—FLATS.—Sketch plans have been prepared for the U.D.C., for the proposed erection of 150 flats on land to be acquired from the Hammersmith B.C.

Old Jewry.—The Old Jewry-chambers, Old Jewry, E.C., has recently been taken on building lease by clients of Messrs. H. E. Foster and Cranfield, 6, Poultry, E.C.2, and will shortly be demolished to make room for a building. The site covers an area of about 13,450 ft., the freehold being the property of the Ironmongers' Company. The new building will be erected from plans prepared by Messrs. Robert Angell and Curtis, Keith House, 133-135, Regent-street, W.1.

Richmond.—ALTERATIONS.—For alterations to the "Old Ship" public-house, in King-street, Messrs. Clements and Co. have submitted plans to the T.C., who have approved them.

Richmond. — REBUILDING. — Mr. Edward Maufe, F.R.I.B.A., 4, Pickering-place, S.W.1, is the architect for the rebuilding of the Lodge, Wesleyan College, Friars Stile-road, Richmond.

Tooting.—ALTERATIONS.—Mr. Nowell Parr, F.R.I.B.A., 42, Cranley-gardens, S.W.7, is the architect for alterations to the "Foresters Arm" public-house, 76, Mitcham-road. Tenders have not yet been invited for this work.

Upper Clapton-road. — BUILDING. — Mr. F. T Dear, architect to the United Dairies, Palace-court, W.2, has submitted plans to the Hackney B.C. for building work at 83, Upper Clapton-road, and 2, 4, 6, 8 and 10, Conduit-street, E.5. The building contract has not yet been settled.

Walthamstow.—CHURCH.—A new R.C. church is now in the course of erection in Chingford-road, the builders being Messrs. Wm. Harbrow (1928), Ltd., 214, Rotherhithe New-road, S.E.16. The architect is Mr. John E. Sterrett, A.R.I.B.A., 221, Golders Green-road, N.W.11.

Walworth. — REBUILDING. — Mr. Harold Dicksee, A.R.I.B.A., 22, Portman-street, W.1, is the architect for the rebuilding of a taxi cab garage in Hampton-street, Walworth. The builders are Messrs. George Parker and Sons, Ltd., 124, Sumner-road, Peckham, S.E.15.

RATES OF WAGES IN THE BUILDING TRADE

AS AND FROM 1st FEBRUARY, 1931.

[Every endeavour is made to ensure accuracy, but we cannot be responsible for errors.]

	Masons.	Bricklayers.	Carpenters Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers.
Aberdare	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Accrington	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Aldershot	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Alfreton	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Alnwick	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Altrincham	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Ashford (Kent)	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Ashington	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Ashton-under-Lyne	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Aylsham	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Banbury	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Barnsley	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Barnstaple	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Barrow-in-Furness	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Barry	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Basingstoke	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Bath	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Bedford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Berwick	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bexhill	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Birkenhead	1/8	1/8	1/8	1/9	1/8	1/8	1/8	1/3½
Birmingham	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bishop Auckland	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Blackburn	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Blackpool	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bognor Regis	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Bolton	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bournemouth	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Bradford	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bradford-on-Avon	1/3	1/3	1/3	1/3	1/3	1/2	1/2	11½
Braintree	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0
Brentwood	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bridgwater	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Bridlington	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Brighton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Bristol	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bromsgrove	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bromyard	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Bungay	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Burnley	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Burton-on-Trent	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bury	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bury St. Edmunds	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Buxton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Cambridge	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Canterbury	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Cardiff	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Carlisle	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Chatham	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Chelmsford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Cheltenham	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Chester	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Chesterfield	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Chorley	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Cirencester	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Clacton	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Colchester	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Coventry	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Cranbrook	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Crewe	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Cromer	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Darlington	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Deal	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Denbigh	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Derby	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Devizes	1/3	1/3	1/3	1/3	1/3	1/3	1/2	11½
Dewsbury	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Doncaster	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Dorchester	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Dorking	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Dovercourt	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Driffield	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Droitwich	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Dudley	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Durham	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Eastbourne	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
E.Glam.(Mon.Val.)	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Ely	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Exeter	1/5½	1/5½	1/5½	1/5½	1/5½	1/4½	1/4½	1/1½
Exmouth	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Fakenham	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Felixstowe	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Folkestone	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Frome	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Glossop	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Gloucester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/4½	1/1½
Godalming	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Goole	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Gosport	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Grantham	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Gt. Yarmouth	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Grimsby	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Guildford	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Halifax	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Harpenden	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Harrogate	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Hartlepools	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Harwich	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hastings	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Hatfield	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Hednesford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Hereford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/0½
Herne Bay	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Hertford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Hitchin	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hoddesdon	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Holt	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Huddersfield	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Hull	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Hunstanton	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Huntingdon	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Isle of Wight	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Ipswich	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Keighley	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Kettering	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Kidderminster	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Kings Lynn	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Lancaster	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Leamington Sp	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Leeds	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Leicester	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Leighton Buzzard	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Lichfield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Lincoln	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Littlehampton	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Liverpool	1/8	1/8	1/8	1/9	1/8	1/8	1/8	1/3½
Llandudno	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Llanelly	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
London—								
12 m. radius	1/8	1/8	1/8	*	1/8	1/8	1/7	1/3
12-15 m. radius	1/7½	1/7½	1/7½	*	1/7½	1/7½	1/6½	1/2½
Loughborough	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Lowestoft	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Luton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Macclesfield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Maidstone	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Malvern	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Manchester	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Mansfield	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Margate	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Market Harborough	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Matlock	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Melton Constable	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Melton Mowbray	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Merthyr Tydfil	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Middlesbrough	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Newark	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Newbury	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Newcastle-on-Tyne	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Newcastle-u-Lyme	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
New Forest	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Newmarket	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Newport, Mon.	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Northampton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Norwich	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Nottingham	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Nuneaton	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Oakham	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Oldham	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Oxford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Paignton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Peterborough	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Plymouth	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Pontypridd	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Portsmouth	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Preston	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Ramsgate	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Reading	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Redcar	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Redditch	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Reigate	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Retford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Ripon	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Rochdale	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Rochester	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Rugby	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Saffron Walden	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
St. Albans	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
St. Helens	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Sawbridgeworth	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Saxmundham	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Scarborough	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Sevenoaks	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Sheffield	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Shrewsbury	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Sittingbourne	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Southampton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Southend-on-Sea	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Southport	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
South Shields	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Stevenage	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Stockport	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Stockton-on-Tees	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Stoke-on-Trent	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Stourbridge	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Stourport	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Stowmarket	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Stratford-on-Avon	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Stroud	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4	1/0½
Sunderland	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Swaffham	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Swansea	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Swindon	1/5	1/5	1/5	1/5	1/5	1/5	1/4	1/0½
Tamworth	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Taunton	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Thetford	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Torquay	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Totnes	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Trowbridge	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Tunbridge Wells	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Uttoxeter	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Wakefield	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Walsall	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Walsden	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Warminster	1/3	1/3	1/3	1/3	1/3	1/3	1/2	11½
Warrington	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Warwick	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Wells (Norfolk)	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Welwyn Gar. City	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
West Bromwich	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Weston-sup-Mare	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Weymouth	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Whitby	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Wigan	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Winchester	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Windsor	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Wisbech	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Wolverhampton	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Woodbridge	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Worcester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Worksop	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Worthing	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Wrexham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Wycombe	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Wymondham	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
York	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2

*The rate recognised by the National Association of Plasterers, Granolithic and Cement Workers, as and from the 1st February, 1931, is 1/10½ per hour.

For Building Trade wages in Scotland, see page 1019.

CONTRACTS, COMPETITIONS, &c.

For some contracts still open, but not included in this List, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender, that a fair wages clause shall be observed, that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given is the latest date when the tender, or the names of those willing to submit tenders, may be sent in, the name and address at the end is the person from whom or place where quantities, forms of tender, etc., may be obtained.

Following is a list of abbreviations:—Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; Surveyor S.; Engineer, E.

BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, etc.

DECEMBER 21.

Barrow-in-Furness.—Extensions.—To Buccleuch-st. dairy, for Barrow Co-operative Society. J. Atkinson, architect and surveyor, 11, Market-st., Dalton-in-Furness.

Billingham.—Subway.—Subway under Billingham to Port Clarence branch of London and North Eastern Railway at Belasis-av., Haverton Hill-on-Tees, for U.D.C. E. and S. Dep. £1 1s.

Cork.—Hall.—New city hall and municipal offices on site at Albert-quay, for Corporation. Jones & Kelly, architects, 17, South Frederick-st., Dublin. Dep. £10 10s.

Dagenham.—Fencing.—Wrought-iron fencing at Reede-rd., for U.D.C. T. P. Francis, S. Dep. £1 1s.

Doncaster.—Garage.—Workshops, garage and construction of drains at new highway depot site, Marsh-gate, for C.B. F. Oscar Kirby, B.E., 2, Priory-pl. Dep. £5 5s.

Glasgow.—Installation.—Necessary work in connection with electric lighting and heating installation at Hawthorn-st. Bowling and Tennis Pavilion, for T.C. General Manager, Electricity Department, 4, West Regent-st., Glasgow, C.2.

Huddersfield.—Conversion.—Conversion scheme, for C.B. S. Procter, T.C.

Little Hulton.—Houses.—12 semi-parlour and 24 non-parlour, on Alexandra-rd. scheme, for U.D.C. S. Dep. £2 2s.

Portaferry.—School.—New school, Portaferry, Co. Down, for Very Rev. P. M'Killop, P.P., V.F. T McLean, architect and civil engineer, Church-st., Downpatrick. Dep. £2 2s.

Renfrew.—Houses.—In 12 parts of the county, for C.C. J. C. Fraser, County Clerk, County-buildings, Paisley.

Sutton.—Staircases.—Three new concrete and iron staircases and incidental alterations at Public Hall, Hill-rd., for U.D.C. W. Hedley Grieves, S. Dep. £2 2s.

DECEMBER 22.

Didcot.—Additions.—Also alterations at Didcot Station, for G.W.R. Engineer, Paddington Station. Dep. £2 2s.

Exeter.—Extension.—And alterations. For H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s.

Heunslow.—Telephone Exchange.—For H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s.

Leeds.—Flats.—Houses and flats on Middleton and Torre housing estates, for T.C. J. E. Acfield, City E.

London.—Heating.—Accelerated low-pressure hot water heating, etc., at Plashet Telephone Exchange, Plaistow, E., for H.M.O.W. Contracts Branch, King Charles-st. Dep. £1 1s.

Richmond, Yorks.—Post Office.—Erection of, for H.M.O.W. Contracts Branch, King Charles-st.

Tidworth.—Police Station. Clerk, The Castle, Winchester. Dep. £1 1s.

DECEMBER 23.

Brighton.—Enlarging.—Wood sawing and wood chopping sheds at Brighton Casual Wards, for C.B. B.E. and S. Dep. £1 1s.

Lanark.—Housing.—2 blocks each of 6 houses at Newarthill; 52 houses of flatted type at Harthill, for C.C. P. C. Smith, County Housing and Town Planning Engineer, 13, Clydesdale-st., Hamilton.

Weston-super-Mare.—Houses.—54 on site adjoining Uphill Park-rd., for U.D.C. H. A. Brown, E. and S. Dep. £3 3s.

DECEMBER 28.

Penmaenmawr.—Chalet.—Reinforced concrete chalet, comprising 20 cubicles, on promenade, for U.D.C. J. Parry Hughes, E. and S. Dep. £2 2s.

Roxburgh.—Housing.—(a) 2 blocks of houses (8 houses) at St. Boswells, and (b) 3 blocks of houses (8 houses) at Newtown St. Boswells, for C.C. G. J. Sherriff, County Clerk, Newtown St. Boswells.

DECEMBER 28.

London.—Cleaning, Painting, etc.—At various hospitals, for L.C.C. Clerk, County Hall, Westminster Bridge, S.E.1. Dep. £1.

Oakham.—Cottages.—8 in village of Cottesmore, for R.D.C. E. Hollis Farrant, Clerk, 6, Market-place.

Pocklington.—Housing.—4 non-parlour houses in parish of Sancton, for R.D.C. A. J. Oliver, Clerk. Dep. £2 2s.

DECEMBER 29.

Kent.—Building.—At New Place Farm, Ickham, near Canterbury, for C.C. Charles J. Elgar, architect, Bank-chambers, Wingham.

Keighley.—Installation.—Of low-pressure hot-water apparatus and electric light at Technical College, for West Riding C.C. Education Officer, County Hall, Wakefield.

DECEMBER 30.

***Southampton.**—Houses and Roads, etc.—For the Corporation. Town Clerk, Municipal Offices. Dep. £3 3s.

DECEMBER 31.

Ambleside.—Housing.—12 non-parlour type houses and construction of about 60 yds. of roadway, 36 ft. wide, and laying of sewers, etc., on Blue Hill Housing scheme, for U.D.C. C. L. Gregson, S. Dep. £2 2s.

Bishops Stortford.—Alterations.—And additions at Haymeads Institution, for the Herts C.C. Clerk, Public Assistance Office, Hertford. Dep. £5 5s.

Caversham, Reading.—Post Office Garage.—For H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s.

Fife.—Housing.—9 blocks each of 4 houses of 3 apartments (type "A") and 3 blocks each of 4 houses of 2 apartments (type "Y"), a total of 48 houses in all, for C.C. George B. Deas, architect, Central-chambs., Kirkcaldy. Dep. £1 1s.

Margate.—Fencing.—1,114 lin. yds. or thereabouts of wrought-iron fencing and three double gates, for T.C. B.S., 40, Grosvenor-place.

JANUARY 1.

Bradford.—Demolition.—Of "Victoria Inn," for T.C. N. L. Fleming, T.C.

Chippenham.—Housing.—38 houses of 3 and 2 bedroom non-parlour type houses; 34 houses of 3 and 2 bedroom non-parlour type houses, on west and east sides of Woodlands-rd., for T.C. B.S., High-st. Dep. £5 5s.

Dorset.—Cottages.—Pair of semi-detached cottages at Holding No. 4, Corfe Mullen, Dorset, for the C.C. County Architect, County Offices, Dorchester.

JANUARY 2.

***Evesham.**—Houses.—On the Rynal housing site. Town Clerk, Municipal Offices. Dep. £2 2s.

Halifax.—Garage.—Omnibus garage, Elm Wood, for C.B. A. C. Tippie, B.E., Crossley-st. Dep. £2 2s.

Reigate.—Painting.—Also decorating work at schools, for E.C. B.S.

West Ham.—Heating, etc.—(a) Romford-rd. baths, and (b) mental hospital, Goodmayes, for C.B. J. Roger Preston, consulting heating engineer, 10, Talbot-mansions, Museum-st., W.C.1. Dep. £1 1s. each.

JANUARY 4.

Beaconsfield.—Houses.—36 non-parlour and 8 parlour type houses on Amersham-rd. housing site, for U.D.C. J. H. Crosby, E. and S. Dep. £3 3s.

Doncaster.—Shed.—New cow shed at Manor Farm, Thrybergh, and new store at Thrybergh reservoir, near Rotherham, for C.B. F. Oscar Kirby, Water E.

Gt. Yarmouth.—Store.—New buoy store and dwelling and for various structural alterations, at Trinity Depot, for Corporation of Trinity House. M. K. Smith, Secretary, Trinity House, Tower Hill, London, E.C.3. Dep. £1.

JANUARY 5.

Birmingham.—Building.—Medical superintendent's office, visitors' waiting-room, lavatory accommodation, etc., at West Heath Sanatorium; new mortuary, pathological and post mortem block at Selly Oak Hospital; provision of heating installation, hot and cold water, steam, gas and fire hydrant services, for T.C. F. H. C. Wiltshire, T.C. Dep. £2 2s. each.

Pembroke.—Cottage.—Caretaker's cottage adjoining Solva Congregational Chapel. W. H. John, secretary, Solva.

Portsmouth.—Flats.—(a) 30 flats in York-pl., Portsea, and (b) 12 flats in Britain-st., Portsea, for T.C. R. J. Jenkins, City E. Dep. £3 3s.

JANUARY 7.

***Bradford, Yorks.**—Employment Exchange.—For H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s.

Southampton.—Additions.—Alterations and additions to Fawley Beacon, Southampton Water, for Harbour Board. E. Cooper-Poole, engineer, Harbour Offices, Town Quay. Dep. £2 2s.

JANUARY 11.

***Bolton.**—Houses and Flats.—On the Cameron-st. (No. 2) estate, for the Corporation. Town Clerk, Town Hall. Dep. £2 2s.

***Bolton.**—Shops.—On the Cameron-st. estate, for the Corporation. Town Clerk, Town Hall. Dep £2 2s.

London.—Building.—Demolition of existing buildings and construction of diesel engine house, new weighbridge house and entrances, drainage and contingent works at Brixton pumping station, Waterworks-rd., Brixton-hill, S.W., for M.W.B. Chief Engineer, 173, Rosebery-av., E.C.1. Dep. £10.

JANUARY 12.

Dublin.—Rebuilding.—Of National Maternity Hospital, Holles-st., for Governors. W. H. Byrne & Son, architects, 20, Suffolk-st. Dep. £10 10s.

Hornchurch.—School.—Council school at Rainham-rd., for Essex C.C. Jno. Stuart, F.R.I.B.A., County Architect, Chelmsford. Dep. £2 2s.

JANUARY 13.

***Deptford Bridge, S.E.10.**—Convenience.—For the Deptford B.C. Town Clerk, Town Hall, New Cross, S.E.14. Dep. £1 1s.

JANUARY 14.

Kendal.—Abattoir.—Public abattoir buildings at Sandylands, for T.C. F. W. Oxberry, B.S. Dep. £2.

JANUARY 15.

***Sheffield.**—Sorting Office.—For H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s.

JANUARY 25.

***Carlisle, Padiham and Kearsley.**—Site Works, etc.—For Central Electricity Board. Secretary, Trafalgar-bldgs., 1, Charing Cross, S.W.1. Dep. £2 2s.

***Portishead and Upper Boat.**—Site Works, etc.—For Central Electricity Board. Secretary, Trafalgar-bldgs., 1, Charing Cross, S.W.1. Dep. £2 2s.

MARCH 1.

Uruguay.—Slaughterhouse.—Large slaughterhouse and plant, for Frigorifico Nacional. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. No. G.X. 10927.)

NO DATE.

Lilleshall.—Houses.—Three houses and five sets of farm buildings at Lilleshall. County Land Agent, 5, Belmont, Shrewsbury.

Plymouth.—Painting.—External painting work for 92 houses, for Committee of Management of Lady Astor Housing Trust, Mount Gold. J. Leighton Fouracre, F.R.I.B.A., Lloyds Bank-chambs., Bank-st.

Plymouth.—Painting.—External painting work, for Committee of Management of the Ballard Institute, West Hoe-rd. J. Leighton Fouracre, F.R.I.B.A., Lloyd's Bank-chambs., Bank-st.

Worksop.—Shop.—In Newgate-st., for Worksop Co-operative Society, Ltd. J. Haslam, architect, Worksop. Dep. £2 2s.

MATERIALS, etc.

DECEMBER 21.

Cradley Heath.—Pipes.—132 tons of 9-in., 15-in. and 20-in. spigot and socket cast-iron pipes and about 9 tons of bends and branches, for Upper Stour Valley Main Sewerage Board. Geo. P. Deeley, E., 13, Church-st., Stourbridge. Dep. £2 2s.

Hereford.—Highway Materials.—For T.C. City E.

Sleaford.—Road Materials, etc.—For U.D.C. S. F. Clare, S.

DECEMBER 22.

Nottingham.—Builders' Materials.—For Gas Department. Gas Engineer, 6, George-st.

London.—Highway Materials.—For Lambeth B.C. O. Cattlin, B.E.

DECEMBER 23.

Angora.—Bricks, etc.—Refractory bricks and mortar, for Ministry of National Defence. Dept. of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. No. B.X. 7188.)

DECEMBER 24.

Newbury.—Highway Materials, etc.—For T.C. B.S.

DECEMBER 28.

Devon.—Road Materials.—For C.C. B. S. Miller, clerk, The Castle, Exeter.

London.—Surfacing.—Tar surfacing 70 miles of roads, for Islington B.C. R. H. Jerman, T.C.

DECEMBER 31.

Derbyshire.—Road Materials.—For C.C. C. G. Millican, C.S., St. Mary's-gate, Derby.

Rhondda.—Builders' Materials.—For U.D.C. E. Taylor, E. and S.

JANUARY 1.

Glasgow.—Lime.—For T.C. D. Stenhouse, T.C.

JANUARY 4.

Lindsey (Lincs).—Road Materials.—For C.C. A. G. Bradshaw, C.S., Newland, Lincoln.

West Riding.—Road Materials.—For C.C. West Riding Surveyor, County Hall, Wakefield.

JANUARY 5.

Dover.—Tar.—For T.C. W. Boulton Smith, B.E.

Dover.—Granite Chippings.—For T.C. W. Boulton Smith, B.E.

London.—Pipes, etc.—For G.W.R. F. R. E. Davis, secretary, Paddington Station, W.2.

JANUARY 6.

Leeds.—Highway Materials.—For T.C. E. W. Cookerlyne, Highways E., 155, Kirkstall-rd.

London.—Highway Materials.—For Wandsworth B.C. D. A. Nicholl, T.C.

JANUARY 7.

London.—Granite, etc.—For St. Pancras B.C. E. W. Swinstead, B.E. and S.

Norfolk.—Highway Materials.—For C.C. S. H. Warren, C.S., Norwich.

JANUARY 9.

Blackburn.—Builders' Materials, etc.—For C.B. H. M. Webb, B.E.

JANUARY 15.

London.—Bricks, etc.—For Islington B.C. Chief Electrical Engineer, Electricity Works, 60, Edengrove, Holloway, N.7.

JANUARY 18.

London.—Highway Materials.—For Camberwell B.C. W. Bell, B.E. and S.

JANUARY 22.

Farnborough. — Road Materials.—For U.D.C. J. E. Hargreaves, E. and S.

NO DATE.

Soke of Peterborough.—Highway Materials.—For C.C. H. Russell, C.S.

ENGINEERING, IRON AND STEEL.

DECEMBER 21.

Alsager.—Extension.—Of sewage disposal works at Day Green, for U.D.C. H. V. Lynam, S. Dep. £1.

Ayr.—Water Supply.—Excavating and refilling trenches for laying and jointing about 5,930 lin. yds. of 21 in. dia. steel pipes and specials, providing and fixing venturi meter, construction of meter house, and other relative work, for T.C. Warren & Stuart, C.C.E., 94, Hope-st., Glasgow. Dep. £2 2s.

Cannock.—Sewer.—3,130 lin. yds. of sewers varying from 21 to 39 in. in dia., manholes, together with screening chambers, detritus tanks, sedimentation tanks, dosing chambers, bacteria beds, humus tanks, storm water tanks, sludge lagoons, engine houses, pump wells, and incidental works, for U.D.C. Robert Blanchard, E. and S. Dep. £5 5s.

Chatham.—Sewerage.—Construction of low level pumping station, together with all appurtenant works, in dockyard, for T.C. W. H. Radford & Son, engineers, Albion-chambs., King-st., Nottingham. Dep. £3 3s.

Congleton.—Reservoirs.—Three concrete reservoirs, for Odd Rode and district water scheme, for R.D.C. H. Lapworth, E., 25, Victoria-st., Westminster, S.W.1. Dep. £5.

Ellesmere Port and Whitby.—Sewage.—For sewage disposal works, for U.D.C. A. H. S. Waters, E., 25, Temple-row, Birmingham Dep. £5 5s.

Johannesburg.—Bridgework.—Bridgework superstructure for the Umbilo-rd. bridge, Durban, for South African Railways and Harbours Administration. Dep. of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. G.X. 10921.)

Oxford. — Waterworks. — Extensive waterworks installation and 2 lengths of pipeline, at Swinford, for T.C. Sir Alex. Binnie, Son & Deacon, Artillery House, Artillery-row, Victoria-st., Westminster, S.W.1. Dep. £10.

Rochford.—Sewerage.—At Great Wakering, for R.D.C. W. E. Blizard, E., 9, Victoria-st., Westminster. Dep. £5 5s.

DECEMBER 22.

North Kesteven. — Water Scheme. — Cast-iron pipes, special castings, etc., in connection with water scheme, for R.D.C. Elliott & Brown, chartered civil engineers, Burton-bldgs., Parliament-st., Nottingham. Dep. £3 3s.

North Kesteven.—Water Scheme.—Two mass concrete reservoirs, also erection of brick pumping station and other appurtenant works; laying of iron pipe water mains, etc., for R.D.C. Elliott & Brown, chartered civil engineers, Burton-buildings, Parliament-st., Nottingham. Dep. £3 3s.

Southall-Norwood.—Sewerage.—6¾ miles of cast-iron, concrete and stoneware sewers, from 12 in. to 36 in. in diameter, partly in tunnel; and sewage purification works, comprising grit chambers, sedimentation tanks, trickling filters, etc.; for U.D.C. A. J. Martin, E., 108, St. George's-sq., Westminster, S.W.1. Dep. £3 3s.

DECEMBER 23.

Perth.—Drainage.—Reinforced concrete sewage collecting tank, for T.C. Thomas M'Laren, B.S., 16, Tay-st. Dep. £1.

Petersfield.—Sewerage.—Providing and laying of about 11,200 lin. yds. of stoneware pipe sewers varying from 12 in. to 6 in. in diameter, also manholes, etc., and 1 pumping station in Liphook and construction of sewage disposal works, comprising sedimentation tanks, percolating filters, humus tanks, pumping station for sludge, and other works on disposal site near Standford, for R.D.C. G. Swayne, E., 1, Victoria-st., Westminster, S.W.1 Dep. £3 3s

Saffron Walden.—Extensions.—To waterworks, for T.C. A. H. Forbes, E. Dep. £2 2s.

Stockholm.—Bridge.—Construction of Stockholm Western bridge for Stockholm Harbour Board. Dept. of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. No. G.X. 10897.)

DECEMBER 24.

Newtongrange.—Drainage.—Extension of sewage purification works, for Midlothian C.C. Carfrae & Morrison, C.E., 4, Hill-st., Edinburgh. Dep. £1.

Rothesay. — Building. — Filter house, settling tanks, clear water tank, access roads, etc., and relative works at Loch Dhu, for T.C. J. & A. Leslie & Reid, C.E., 72a, George-st., Edinburgh. Dep. £1.

DECEMBER 28.

Pickering.—Sewerage.—4,000 lin. yds. of stoneware pipe sewers 15 in. to 16 in. in dia., and about 300 yds. of 12 in. and 6 in. dia. cast iron pipe sewers, together with manholes, ejector and compressor station, etc., and of sewage purification works comprising detritus tanks, sedimentation tanks, percolating filters, humus tanks, storm water tanks, sludge beds, pump house, effluent channels, effluent sewer, etc., for U.D.C. Henry Smith, E., 36, Burgate. Dep. £5.

Wokingham.—Reservoir.—Mass concrete reservoir at Bearwood Hill, for R.D.C. J. S. Alford, 11, Victoria-st., Westminster. Dep. £5.

DECEMBER 29.

Hornchurch.—Culvert.—Reconstruction of culvert and part of Slewins-lane, for U.D.C. F. Alderson, S.

DECEMBER 31.

Brigg.—Mains.—2,800 yds. 3-in., 1,600 yds. 4-in., 1,200 yds. 6-in. and 50 yds. 7-in. cast-iron water mains, a pumping station with engines and pumps, and reinforced concrete water tower for U.D.C. Silcock & Simpson, engineers, 25, Victoria-st., Westminster, S.W.1. Dep. £5.

Lisnakea.—Bridges.—Two ferro-concrete bridges —east and west crossings—with other collateral works (Contract No. 3), over Upper Lough Erne, for Fermanagh C.C. J. P. Burkitt, C.S., Enniskillen Dep. £3 3s.

Ormskirk.—Sewerage.—Sewerage work for sewage disposal works at Lathom and Burscough, for U.D.C. H. B. Ward, consulting engineer, 26, North John-st., Liverpool. Dep. £3 3s.

Stockport.—Pipes.—6,250 tons of cast iron pipes and specials, from 4 in. to 30 in. dia., together with few lengths of steel-flanged pipes, 12 in. and 15 in. dia., for Goyt Valley scheme, for Corporation. G. H. Hill & Sons (Manchester), civil engineers, 40, Kennedy-st., Manchester. Dep. £3 3s.

JANUARY 1.

South Molton.—Reservoir.—Covered concrete reservoir, for T.C. E. Turnbull, B.S., 1, East-st. Dep. £3 3s.

JANUARY 4.

Golborne.—Sewage.—Sewage disposal works at Golborne, for U.D.C. C. J. Lomax & Son, chartered civil engineers, 37, Cross-st., Manchester

London.—Rebuilding.—Rebuilding and strengthening of granite parapet of river wall in front of Grosvenor-rd. and Pimlico-gdns., rebuilding at higher level of granite coping and railings in front of Grosvenor-rd. and consequent alterations to footway paving in Grosvenor-rd. and Pimlico-gdns., for L.C.C. Chief Engineer, Old County Hall, Spring-gdns., S.W.1. Dep. £2.

JANUARY 12.

Durham.—Footbridge.—Lattice girder footbridge over River Tees at Cotherstone, for C.C. William J. Merrett, C.E. and S., 43, Old Elvet, Durham.

Kincardine-on-Forth.—Steelwork.—For bridge, for Joint Committee of C.C.'s of Stirling and Clackmannan. Sir A. Gibb & Partners, engineers, Queen Anne's-gate, S.W.1. Dep. £10 10s.

JANUARY 13.

Wincanton.—Water Supply.—For Penselwood, for R.D.C. Aubrey J. Allen, E., Half Moon-st., Sherborne. Dep. £5.

JANUARY 16.

Glasgow.—Girders.—Steel plate girders and cross girders required for three bridges to carry the 48-in. syphon pipes over Aberfoyle to Glasgow-rd., near Balfron Station; L. & N.E. Railway at Balfron Station; and River Endrick, about 1½ miles from Balfron Station, for T.C. Geo. Henshilwood, Engineer and Manager, Water Department, 80, John-st., Glasgow, C.1.

JANUARY 20.

Middlesex.—Sewerage.—Main sewers of brickwork, concrete and cast-iron segments for West Middlesex main sewerage, for C.C. Dodd & Watson, engineers, Wellington House, Bennetts-hill, Birmingham. Dep. £5 5s.

FEBRUARY 18.

Cairo.—Waterworks.—For Egyptian Ministry of the Interior. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. No. G.X. 10962.)

NO DATE.

Eton.—Sewerage.—At Iver, for R.D.C. A. Gladwell, consulting engineer, Denmark House, Windsor-rd., Slough.

ROAD, SEWERAGE, AND WATER WORKS.

DECEMBER 21.

Aspull.—Reconstruction. — Of Haigh-rd., for U.D.C. James Occleshaw, S. Dep. £2 2s

Ayr.—Water Supply.—17,300 lin. feet of 21 in. dia. bitumen-lined, lap-welded steel pipes, together with bitumen-lined steel specials and cast-iron specials, for T.C. Warren & Stuart, 94, Hope-st., Glasgow. Dep. £2 2s.

Chester.—Sewerage.—Concrete pipe sewers at Larhe, for T.C. C. Greenwood, City E. Dep. £2 2s.

Coventry.—Making-up.—Of Villa-rd., for T.C. E. H. Ford, City E. and S. Dep. £3 3s.

Hull.—Main.—Trenchwork, and laying of about 4 miles of 3-in. water main, for T.C. W. D Bingham, Water and Gas Engineer. Dep. £1.

Manchester.—Paving.—Various streets, for T.C. F. E. Warbreck Howell, T.C. Dep. £1 1s.

Reigate.—Drainage.—4,000 yds. of 7 in. and 4,000 yds. of 9 in. stoneware sewers, together with manholes, etc., pumping main and appurtenant works, at Merstham and Hooley, for R.D.C. G. Bertram Kershaw, chartered civil engineer, 9, Victoria-st., Westminster, S.W.1. Dep. £5.

Waltham Holy Cross.—Sewerage.—980 yds. lin. of 12 in. stoneware pipe sewers, 1,700 yds. lin. of 9 in. stoneware pipe sewers, and 235 yards lin. of 6 in. stoneware pipe sewers in High Beech, for U.D.C. W. C. Holloway, E. and S.

Willesden. — Improvements. — Chartley-av., Donnington-rd., Haycroft-gardens, for U.D.C. F. Wilkinson, E.

DECEMBER 22.

Sale.—Making-up.—Of Claremont-rd., Glenthorngrove, South Grove (part of), Wolseley-rd., for U.D.C. E. Bleakley, E. Dep. £2 2s.

DECEMBER 23.

Guildford.—Sewer.—897 lin. yds. of 54 in. and about 42 lin. yds. of 51 in. dia. brick sewer in tunnel at depths varying between 46 ft. and 25 ft., together with manholes and incidental works, for T.C. J. W. Hipwood, B.S. Dep. £5 5s.

Oldham.—Roads.—Roads on the Derker Housing estate, for C.B. B.E. and S. Dep. £2 2s.

Twickenham.—Reconstruction.—Staines-rd. reconstruction—first cross rd. to fifth cross rd., for T.C. Gilbert R. King, B.E. and S. Dep. £2 2s.

DECEMBER 28.

Midhurst.—Main.—910 yds. of 3 in. c.i. water main and fittings from entrance of West Lavington Hill-drive, for R.D.C. S. E. Stratford, Council Offices.

DECEMBER 29.

Beddington and Wallington.—Making-up.—Of Green-lane, South Beddington, for U.D.C. S. F. R. Carter, E. & S., 42, Woodcote-rd., Wallington. Dep. £2 2s.

Felixstowe.—Making-up.—Of St. Edmund's-rd., for U.D.C. H. Clegg, S.

Isle of Wight.—Water Supply.—Supplying and laying about 1½ miles of 3 in. dia. cast-iron water main from Porchfield to Whitehouse and Eolis Farm, in parish of Northwood, Isle of Wight, together with valves, hydrants and works, for R.D.C. W. E. Blizard, E., Castle-lane, Southampton. Dep. £2 2s.

Isle of Wight.—Water Supply.—Supplying and laying about 1,475 yds. of 6 in. dia. spun-iron water main at Brighstone, together with valves, hydrants and works incidental thereto at Brighstone, for R.D.C. W. E. Blizard, E., Castle-lane, Southampton. Dep. £2 2s.

DECEMBER 29.

Andover.—Sewerage.—700 yds. of 15 in. dia. cast-iron and stoneware pipe sewer, together with manholes and other works incidental thereto, for T.C. G. A. Clark, B.S. Dep. £1 1s.

DECEMBER 30.

Merton and Morden.—Surfacing.—Cannon Hill-lane, section 2, between Grand-drive and Parkway, for U.D.C. G. Jerram, E. and S. Dep. £1.

Weymouth and Melcombe Regis.—Resurfacing.—Of Rodwell-rd. and Preston-rd., for T.C. R. W. Vine, B.E. and S.

DECEMBER 31.

Bumpstead.—Water supply.—2,700 and 1,140 yds. of water main, for R.D.C. H. B. Thake, S., 10, High-st., Haverhill.

Kingston-upon-Thames.—Reconstructing.—Various sections of county roads, for T.C. B.S. Dep. £2 2s.

Surbiton.—Making-up.—Of Green-lane, for U.D.C. S Dep. £1 1s.

Uxbridge.—Sewerage.—6,000 yds. of 9 in. 1,000 yds. of 12 in., and 500 yds. of 15 in. dia. sewers and appurtenant works, at Harefield, Ickenham and Hillingdon East, for U.D.C. E. E. T. Bolton, E., 263, High-st. Dep. £2 2s.

Walton-on-Thames. — Making-up. — Of Cromwell-rd. (part of), for U.D.C. R. Wilds, E. and S. Dep. £1 1s.

JANUARY 1.

Plymouth.—Ballasting.—About ½ mile of roads and 1½ miles of sewers, at Barne Barton housing estate, St. Budeaux, Devonport, for T.C. J. Wibberley, C.E. Dep. £2 2s.

JANUARY 2.

Cannock.—Sewer.—Provision and laying of 827 lin. yds. of 12-in. dia. cast iron sewer, the construction of manholes and other works in connection therewith, at Cannock-rd., Heath Hayes, provision and laying of 667 lin. yds. of 9 in. dia. cast iron sewer, with hatch-boxes, and other works in connection therewith, at Pye Green, Hednesford, for U.D.C. R. Blanchard, E. and S. Dep. £2

JANUARY 4.

Hayes and Harlington.—Sewers.—2½ miles of concrete and stoneware sewers, varying in dia. from 6 in. to 36 in., together with manholes and other works incidental thereto, for U.D.C. E. A. Sandford Fawcett, E., 53, Victoria-st., Westminster, S.W.1. Dep. £5 5s.

Slough.—Making-up.—Of Burlington-av., for U.D.C. A. Bromly, E.

Southampton.—Making-up.—Of Pitt-rd., Mill-rd. and Claremont-cres., for C.B. B.E. Dep. £1 1s. each.

JANUARY 5.

St. Helens (I. of W.).—Sewer.—Laying 125 ft. of 12 in. cast-iron sewer outfall below low water mark at Seaview, I. of W., for St. Helens U.D.C. C. Purvey, S.

JANUARY 6.

Hove.—Making-up.—Roadway, providing and laying new granite kerbing and channelling and artificial stone slab paving, and other works in connection therewith in Holmes-av., for T.C. T. R Humble, B.S.

London.—Paving.—Of Combemartin-rd., Southfield, and Hoadly-rd., Streatham, for Wandsworth B.C. E. J. Elford, B.E., 215, Balham High-rd., S.W.17. Dep. £1 1s.

Watford.—Sewerage.—5,200 lin. yds. of stoneware pipe, concrete pipe and cast-iron pipe, soil and surface water sewers, varying in size from 30 in. to 9 in. dia., together with manholes and other appurtenant works, for T.C. W. W. Newman, B.E. Dep. £5 5s.

JANUARY 7.

Slough.—Sewers.—1,000 yds. approximately of 9 in. dia. stoneware pipe sewer, with manholes and incidental works, in Red Lion-rd. and Shaggy Calf-lane, for U.D.C. A. Bromly, E.

JANUARY 9.

Penge.—Road.—Road improvement works in Anerley-rd., for U.D.C. Col. H. W. Longdin, S. Dep. £1 1s.

JANUARY 11.

Congleton.—Pipes.—2,000 tons of cast iron regular pipes and specials, for Odd Rode and district water scheme, for R.D.C. H. Lapworth, E., 25, Victoria-st., S.W.1. Dep. £2.

Ilkeston.—Pipes.—370 tons of cast iron regular pipes and specials of 16 in. and 14 in. dia., for T.C. H. Lapworth, E., 25, Victoria-st., Westminster, S.W.1. Dep. £2.

JANUARY 12.

Kincardine-on-Forth.—Foundations.—Also piers, approach spans, roadway, fendering, etc., for new bridge, for C.C.s of Stirling and Clackmannan Sir A. Gibb & Partners, Queen Anne's-gate, S.W.1 Dep. £10 10s.

JANUARY 13.

London.—Making-up.—Of Fairweather-rd. and mews rear of Stoke Newington High-st., for Hackney B.C. P. Holt, B.E. and S. Dep. £1 each.

Sutton and Cheam.—Drainage.—Laying, construction, completion and maintenance of concrete tube surface water sewers all in open cut, together with manholes and appurtenant works, for U.D.C. Wm. Hedley Grieves, E. and S. Dep. £3 3s.

Public Appointments

JANUARY 2.

Norwich.—Chief Architect. City Engineer, Guildhall.

TOWN PLANNING.

THE following town-planning progress in England and Wales is recorded for month ended November 30 :—

Draft schemes adopted (Stage BBB).—Middlesex : Finchley U.D.C. (No. 4); Finchley U.D.C. (No. 5). Nottinghamshire : W. Bridgford U.D.C.

Preliminary statement approved (Stage BB).—Cardiganshire : Aberystwyth T.C. Essex : Purfleet U.D.C. (W. Thurrock). (London : London C.C. (No. 8); London C.C. (No. 9). Yorkshire (W. Riding) : Doncaster T.C.; Horbury U.D.C.

Preliminary statement submitted (Stage B. —Hertfordshire : St. Albans T.C.

Resolutions received (Stage A).—Kent : Canterbury T.C. (Special Area No. 2); Maidstone T.C. (No. 2); Maidstone R.D.C. (Maidstone T.C. No. 2); Hollingbourn R.D.C. (Maidstone T.C. No. 2). Staffordshire : Cannock U.D.C. Yorkshire (N. Riding) : *Middlesbrough T.C., *Redcar T.C., *Thornaby-on-Tees T.C., *Eston U.D.C., *Saltburn-by the-Sea U.D.C., *Guisborough R.D.C., *Middlesbrough R.D.C. (*Resolutions passed by South Tees-side Joint Town Planning Committee.)

Proposed Bridge, Bermuda.

A new highway bridge is to be erected connecting St. David's Island with St. George's Island at the east end of the island of Bermuda. The contract will be carried out by the Cleveland Bridge and Engineering Co., Ltd., of Darlington. There will be four main 75 feet spans of the Crown Agents' standard road type and one electrically operated lifting span, giving a clear opening of 80 feet. The bridge is designed to carry a double line of traffic 18 feet in width on the fixed spans, while the width of roadway on the lifting span will be 14 feet. The erection will be carried out departmentally under the supervision of the Director of Works, Bermuda.

PROPOSED NEW BUILDINGS & OTHER WORKS*

In these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced. Abbreviations: T.C. for Town Council; U.D.C. for Urban District Council R.D.C. for Rural District Council; E.C. for Education Committee; B C. for Borough Council; P.C. for Parish Council; M.H. for Ministry of Health; M.T. for Ministry of Transport; C.B. for County Borough; B. of E. for Board of Education; M.W.B. for Metropolitan Water Board; Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Clerk, C.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; Surveyor, S.; Engineer, E.

Bakewell.—U.D.C. propose additional 18 houses. T. W. Baker, S.

Barnes.—U.D.C. approved: Sports pavilion, Chrysler Works, Mortlake-rd., Kew. V. S. Petrie.

Barnstaple.—T.C. approved: 30 houses on site in Oakleigh-rd.—Lay-out plan for Littabourne Building estate been approved, subject to modifications.

Barrow.—T.C. received M.H. sanction to borrowing of amount required for 56 flats at Roosegate.

Bedford.—Hy. Inskip, architect, 31, Goldington-rd., has prepared plans for residences in Elstow-rd.—Houses in Honeyhill-rd., Bedford. Plans by Henry C. Inskip, architect, 31, Goldington-rd.

Bexhill.—T.C. approved: 2 pairs of semi-detached houses, St. George's-rd., J. E. Alce, J. Alce & Sons.

Birmingham.—Funds being raised for Church of St. Chad's, Erdington.

Blackburn.—T.C. approved: Alterations, 154, Bolton-rd., Blackburn Co-operative Society, Ltd.; church, Brownhill-drive. St. Gabriel's Parochial Church Council; alterations, 48, 50 and 66 Henrietta-st., J. H. Beardsworth.

Blackpool.—Blackpool Co-operative Society, Ltd., to build new branch stores at Preston Old-rd., alterations and additions are to be made at the St. Heliers-rd. branch stores, and large extensions to Central Stores in Coronation-st.

Blyth.—Housing Committee negotiating for land at Bebside for 50 houses. L. Leeper, B.S.

Bolton.—A new Sunday school and men's institute is proposed for St. Margaret's Church.—A site off New Brook-rd. been presented to Parochial Council of St. Andrew, Hulton, for Church.—Parochial Council of St. Philip's Church propose permanent vicarage.

Bradford.—Rev. Patrick J. Ennis, The Presbytery, 651, Leeds-rd., proposes Church, adjacent to existing Church, Leeds-rd. Accommodation for 600 people, and cost £12,000. Holton & Fox, architects, Union-st., Dewsbury.

Brighton.—T.C. decided upon erection of waterworks pumping station at Balsdean at £108,950.

Bromley.—T.C. approved: 6 shops with living rooms over High-st., Parnacott.

Broughton (Cumberland).—Local Miners' Welfare Committee is endeavouring to raise funds in order to renovate Miners' Hall

Calne.—T.C. approved: 3 pairs of semi-detached houses, Oxford-rd., H. J. Weston & Son.

Cambuslang.—Lanarkshire C.C. are to reconstruct and make additions to St. Bride's Catholic school. John Stewart, architect, Master of Works Office, Motherwell.

Cannock.—U.D.C. to build 10 houses in Moss-st.

Carlton.—Rothwell U.D.C. to acquire site for slipper baths.

Cardiff.—In order that G.W.R. Co. may be in position to proceed without delay, construction of new main railway station, City Council been asked to approve plans for spacious new 'bus centre off Wood-st., immediately in front of new station.

Carlisle.—T.C. considering proposals for 54 small houses for aged people at Old Greystone, and tenders to be invited.

Cashel.—Tipperary C.C., South Riding, applied for sanction to borrow £3,000 for purpose of providing technical school.

Caterham and Warlingham.—U.D.C. approved: 3 shops, Croydon-rd., L. G. Hartley; 12 houses, Stafford-rd., E. O'Sullivan (Kenley), Ltd.

Chadderton.—Robert Martin, F.R.I.B.A., diocesan surveyor, 90, Deansgate, Manchester, preparing plans for Vicarage at St. Mark's Church, for Ecclesiastical Commissioners.

Chailey.—R.D.C. approved: theatre at Glyndebourne House, J. Christie; houses, Malling Hill estate, Ringmer Building Works.

Chatham.—T.C. approved: 16 houses at Mitchell-rd., for F. Parham; 5 houses at Symon's-av., C. J. Howard; 18 bungalows at Albert-rd., C. J. Howard.

Chester.—E.C. recommend proceeding with school on Lache estate.

Chesterfield.—T.C. approved: Extension to offices, Brampton Ironworks, Shepley-st., Plowright Bros., Ltd.

Clare.—County Board of Health approved engineers' estimates of £543 for repairs of residence of Dr. MacClancy, County Hospital, Ennis, and £383 on repairing roof of County Home.

Coulsdon and Purley.—U.D.C. received M.H. sanction to borrow £650 for purchasing land for fire sub-station site, Sanderstead.—Plans passed: E. R. Taylor, alterations and additions, 6, 8 and 10, Chipstead Valley-rd., Coulsdon.

Coxhoe.—Coxhoe New Hall and Institute Committee decided to erect new hall and institute in accordance with plans prepared by W. A. Kellett, architect.

Derby.—Education Sites and Buildings Committee decided to apply for estimates for enlargement of chemical laboratory at Derby School.

Dewsbury.—T.C. approved: Simon Crawshaw Trustees, alterations, Oates-st. Chambers, Union-st.; W. Wormald, 6 houses, Bennett-lane; J. A. Robinson, 5 houses, Boothroyd-lane.

Dover.—T.C. approved: new assembly hall, Co-operative Society, Maison Bieu-rd.; alterations and additions at 45-53, High-st., Turnpenny Bros.

Dublin.—Plans approved by City Architect :—S. C. road, Kilmainham, 4 houses, P. Hyland; St. Vincent's Asylum, Fairview, hall; Kimmage-rd., 7 shop premises, J. Ward; Abbeyfield-rd., Killester, hall.

Duncon.—Board of Health, George-st., Edinburgh, approved Council's Argyle-st. housing scheme. W. Rodger, Housing Architect and Engineer.

Ealing.—T.C. approved: Park-av. (1-43 odd), 22 houses, Huxley-gdns. (1-41 odd), 21 houses, for J. Marshall (architect, G. E. Clare, 33, College-rd., Harrow); Clauson-av., 43 houses for Bramley Smith (C. Peppiatt, 22, Western-av., W.3); 16 houses, for John Laing & Son, Ltd., Horsenden Wood estate, Greenford; Bideford-av., 43 houses, for R. Fielding & Son, Stanhope-rd., Blackpool; Cleveland-rd., 6 houses, for J. T. Rose, Ltd. (architects, P. Chase Gardener & Co., 269, High-st., Hounslow); Boston-rd., 4 shops and flats, B. Hopkin Morris (architects, P. Chase, Gardener & Co., 269, High-st., Hounslow); Grange-rd., 18 houses and garages, for H. J. Parker, 6, Blandford-rd., Ealing, W.5; Beaconsfield-rd., 15 houses and 15 garages, for G. Green & Sons, Dawley-rd., Hillingdon; Costons-lane, 8 houses, Oldfield-lane, 8 houses, Chaucer-rd., 6 houses, for Mrs. I. Sherry (builders, Selected Sites Development Trust, Ltd., Sudbury Priory Estates, Harrow-rd., Wembley); Western-av., 30 shops with flats over, for R. Lancaster & Son, Ltd.; Dawlish-av., 30 houses, for A. E. Murdoch; Perivale-lane, additions to Perivale Works, for W. Geipel, Ltd. (surveyors, W. H. Read & Co., 42, Haven-green, W.5); Uxbridge-rd., W.13, alterations to 213, for E. G. James, 215, Uxbridge-rd., W.13; Pitshanger-lane, revised plan of shops only for A. H. Hornsby and A. W. Goodman (architects, Hall-Jones & Dewhirst, Haven Green, Ealing, W.5); Ruislip-rd., additions to "The Playhouse," for F. Hammond (Greenford Playhouse, Ltd.) (architect, A. R. A. Blay, "Mountview," Rickmansworth); Perivale-lane, office and workshop, for J. & J. H. Boothman (1930), Ltd., Briarhill estate, Northolt; Mansell-rd., alterations and additions to 71 and 73, for Dr. Deniston (architect, H. S. Bostock, 13, Heston-lane, Norwood Green, Southall); Lythamgrove, transformer station, for Borough Electricity Supply Dept.; Greenford estate, Bennetts-av. (part), Middleton-av., Ingram-way, Downing-drive, for Ecclesiastical Commissioners (surveyors, R. B. Grantham & Son, 5, Little College-st., Westminster Abbey, S.W.1).

Edenthorpe.—Scheme being considered for church on new housing estate.

Flintshire.—E.C. propose extensions to elementary school at Hawarden.

Galway.—County Board of Health to invite tenders for hospital at Clifden.

Gateshead-on-Tyne.—F. Davies, 33, Durham-rd., Low Fell, prepared plans for 8 garages and a workshop in Back Church-rd., for T. Pringle. Plans approved, but no contract let.

Gillingham.—T.C. approved: terrace of 16 houses, Milner-rd., by A. Newnham, for C. H. Howard; branch bank, corner Watling-st. and Derby-rd., by W. Braxton Sinclair, for Westminster Bank; 6 houses, Corporation-rd., by A. E. V. Newnham, for C. J. Howard.

Glasgow.—Corporation and Lanarkshire C.C. are negotiating over erection of a new Catholic school —St. Joseph's—for children of the Tollcross area of Lanarkshire. Architect, J. Stewart, Education Offices, Motherwell.—Albion Greyhounds (Glasgow), Ltd., Insurance Building, St. Vincent-st., to erect shelters at Greyhound Racing Track, Broomloans-rd., Ibrox.

Godstone.—R.D.C. approved: showrooms, Station-rd. East, Oxted, Croydon Gas Co.

Hanging Heaton.—Managers of C. of E. day schools propose alterations.

Harrow.—Plans approved by Council: 42 houses, Rossall-av. and 14 houses, Cleveleys-av., R. Lancaster & Sons.

Hayes.—Plans approved by U.D.C.: extension to main factory, Sandow-rd., Hayes Cocoa Co.

Hayes.—U.D.C. received M.H. sanction to £72,000 for sewerage works.

Keighley.—Members of Temple-st., Wesleyan Church, Rev. W. Brookman, propose alterations, etc., to Church and school at £895.

Kidderminster.—T.C. approved: G. Williams, 5 houses, Talbot-st.

Lanarkshire.—New bridge between the County of Lanarkshire and Ruthergien, by Lanarkshire C.C. W. Chapman, C.E., Hamilton.

Lincoln.—E.C. propose extension at Skellingthorpe-rd. C. school at £5,250. New department to be built at St. Giles' school at £19,500.

Llanfairfechan.—U.D.C. approved: Alterations at Council school, Penmaenmawr-rd.

London (Bermondsey).—L.C.C. recommend borrowing by B.C. £14,900, £1,220, £15,600, £13,550, £9,300, £12,075, £28,230, and £10,000 for housing purposes in the borough.—Inquiry being held into application of B.C. for £48,705 for baths, etc., in Grange-rd.—

*See also List of Contracts, Competitions, etc.

5 houses been closed and handed over to General Manager for demolition.—Plans passed: London Electric Supply Corporation, Ltd., 25a, Cockspur-st., S.W.1, transformer chamber, adjoining Eastbourne-buildings, Swan Mead.

London (Deptford).—B.C. approved: G. T. Harman, 90a, High-st., Lewisham, S.E.13, 1 house, Shardeloes-rd. and 1 on each side of proposed new street, southwards of St. Donatts-rd.

London (Kingsway).—L.C.C. recommend £24,200, approved in respect of widening of Great Queen-st. at Drury-lane and Wild-st., be enlarged so as to cover improvement on south-eastern side of Great Queen-st. and the north-eastern side of Wild-st.

London (Lambeth).—L.C.C. decided to make annual grant to Duchy of Cornwall in respect of 70 flats and 23 maisonettes proposed to be erected in Newburn-st.

London (Stoke Newington).—B.C. recommend £3,000 for public convenience at Manor House Gateway.

London (Wandsworth).—B.C. received M.H. sanction to £6,261 for heating at Clapham Baths.—Plans passed: J. Laing & Son, Ltd., shops with flats over, Streatham High-rd. (No. 45), abutting on Gracefield-gdns.; R. E. Springett, alterations and additions, Timms' Motor Garage, Colinette-rd., Putney; Snelling & Rayment, alterations to "Horse and Groom" p.-h., Chip-st., Clapham North; County of London Electric Supply Co., Ltd., transforming sub-station, Blairderry-rd., Streatham; Gale, Heath & Sneath, 3 shops with flats over, Tooting High-st., abutting on Ansell-rd.; R. Bilham & Sons, 15 houses and 11 garages at junction of Leigham Court-rd. and Culverhouse-gdns., Streatham; Fawcett & Co. (Clapham), Ltd., 14 houses, Parkthorne-rd., Clapham South; R. Dixon & Sons, 13 houses, Girdwood-rd., Southfields; E. Grout, 6 houses, Springwell-rd., Streatham; E. Cook, 6 houses and 3 garages, Broadwater-rd., Tooting; A. Soden, 6 houses, Hoadly-rd., Streatham; Townsend (Builders), Ltd., erection of Putney School Clinic, junction of Clarendon-rd. and Charlwood-rd., Putney; F. J. Moreton, 9 houses, Hoadly-rd., Streatham; Chessums, Ltd., erection of greyhound kennels, outbuildings, etc., New Greyhound Racing Track, Garratt-lane, Fairfield.

London (Woolwich).—L.C.C. recommend £106,000 by B.C. for houses on Middle-pk. estate.

Loughborough.—T.C. approved: Showroom and flat, Derby-rd., W. S. Yeates & Co.; lay-out of 18 houses, Salisbury-st., Brown Bros.

Lowestoft.—T.C. approved: J. Gaze, 6 houses and shop, Kimberley-rd.; A. E. Ingles, 6, bungalows, Blinco-rd., Rock estate, Oulton Broad.

Lurgan.—Board of Guardians decided to apply to Northern Ministry for loan of £40,000 for converting Lurgan Workhouse into district hospital.

Luton.—T.C. approved: Davis Gas Stove Co., Ltd., alterations and additions, Dallow-rd.; E. G. Bell, 22 houses, Alder-cres.; C. Rainbow, 4 houses and shops, Biscot-rd.; J. Frost, 9 houses, Chandos-rd.; H. C. Janes, Ltd., 32 houses, Connaught-rd.

Malling.—R.D.C. approved: 8 semi-detached bungalows, Bradbourne-lane, Ditton, J. Pearce.

Manchester.—Housing Committee propose to proceed with 316 houses on Wythenshawe estate, Northenden. F. W. Platt, Housing Director.

Marley Hill.—Plans by S. J. Stephenson, 2, Saville-place, Newcastle-on-Tyne, for miners' hall and institute at Marley Hill, Gateshead, been approved, but no contract let.

Marple.—U.D.C. propose gas and electricity showrooms in Stockport-rd.

Middlesbrough.—T.C. approved: Additions to ironmonger's warehouse behind Nelson-st., H. B. Beckwith; 8 terrace houses, Acklam-rd., Moorehouse & Barker, Ltd.; lay-out of small building estate at Acklam-rd., corner of Westbourne-rd., B. Day; 8 houses, Newstead-rd., Gilbert Long, Ltd.

Middleton.—Ashton Estates (Middleton), Ltd., proposing acquire land off Jubilee-rd., for shopping centre.

Morecambe.—T.C. propose extensions of fire station in Clark-st. B.E. and S.

Newburn-on-Tyne.—U.D.C. approved building scheme of F. W. Hindmarsh, of Fawdon-lane, Gosforth, and J. W. Vickers, for development of housing estate.

Newcastle-on-Tyne.—Bewley & Scott, builders, Dunston-on-Tyne, are to build a block of 12 shops at Kenton-lane from plans prepared by S. J. Stephenson, 2, Saville-place.

Northampton.—Corporation to build 240 houses, at £80,000.

Ongar.—R.D.C. instructed S. to proceed with preparation of necessary plans, etc., for 32 houses fronting on Wennington-rd. and Lamb's-lane, Rainham.

Ormskirk.—U.D.C. approved plans for 72 houses on Ravenscroft estate, Bridge-st., for T. W. Holmes.

Orpington.—Plans passed: 4 bungalows, 5 detached houses and 5 pairs of houses, Sherwood-rd., E. O'Sullivan (Kenley), Ltd.

Paisley.—New sheds, etc., from plans approved at Gleniffer Soap Works. Holmes & Kingcombe, architects, 79, West Regent-st., Glasgow.

Philadelphia (Durham).—Cowe & Lawson, Central-chams., Chester-le-Street, architects for miners' welfare hall and institute. Scheme been approved, but no contracts placed.

Portsmouth.—T.C. approved: Portsmouth Electricity Supply, transformer station, Goldsmith-av.; W. Ford, 3 blocks of flats, Tangier-rd.; J. McDermott, 12 houses and garages, Chelmsford-rd.; Brickwood & Co., Ltd., rebuilding public bar, "Esplanade Hotel," Clarence Esplanade; A. A. Carter, 11 houses, Northover-rd.; Landport Drapery Bazaar, Ltd., shop and showroom, 117-119, Commercial-rd.

Richmond.—Local Women's Institute propose hall at Brompton-on-Swale.

Rothwell.—Site been acquired for new public baths and slipper baths.

Salford.—E.C. propose electricity sub-stations at Lower Broughton and Higher Broughton. L. Romero, engineer, Frederick-rd., Pendleton.

Sheffield.—Work is to be commenced immediately on a large boxing and sports stadium at Sheffield, near the centre of town. The building will seat 8,000, and will have an ice skating floor. Accommodation for a sports club is provided in the scheme, together with a large restaurant, garage and shops. The architect is Sydney Clough, F.R.I.B.A., 86, Strand, London, W.C.2.

Southampton.—C.B. approved:—additions, St. Mary's College, Midanbury-lane, the Principal; 4 houses, Private-rd. off Warren-crescent, Holly & Herbert; 9 houses, Eastbourne-av., Perrott & Son; 11 houses, Pear Tree-av., W. A. Kneller; alterations and additions, 21, 22, 23 and 24, The Strand, J. Hollis; alterations, Idris Factory, Blechynden-ter., London & Southern Wholesale Co., Ltd.; 14 houses, Branksome-av., and 12 houses, Dawlish-av., A. N. Smith.

South Shields.—Plans by H. Hill, 10, Winchester-st., for bakery, for W. H. Parker, caterer, etc., been approved, but no contracts placed.

Stanley (Durham).—U.D.C. decided to build 100 houses.

Stockport.—Roberts & Wood, FF.A.S., architects, 26, King-st., Manchester, prepared plans for 146 houses and 5 shops on Burntwood Hall estate, Cheadle Hulme.

Stockton-on-Tees.—Construction of retort house at gasworks to be proceeded with by T.C. and application made for loan towards cost of £47,764. W. W. Atlay, manager and engineer, Gasworks Dept.

Stockton-on-Tees.—Plans approved by the T.C. are:—warehouse in Albion-st., Postle & Brown; 6 semi-detached houses in Whitfield-rd., T. Whitear; 10 semi-detached houses in Blackett-av., R. Blackett & Co.

Stourton.—U.D.C. propose new slipper baths.

Stratford-on-Avon.—R.D.C. purchasing site at Henley-in-Arden for housing.

Sunderland.—It is proposed to expend £2,350 on construction of sea wall, etc., at Seaburn.

Tobermory.—New housing scheme to be undertaken by Council.

Wallsend-on-Tyne.—Sanction received by T.C. for 60 flats, and tenders will be invited. J. A. Blench, B.S.

Walthamstow.—T.C. approved:—type K houses, Highams estate, Law Land Building Dept.; alteration to factory, rear 203, High-st., Chas. W. Hodgson; extension to factory, adjoining 25a, Back-rd., H. E. Lane.

West Hartlepool.—T.C. approved: J. English, 6 houses, Charterhouse-st.—Council applying to M.H. for erection of 50 houses in Chester-rd.

Wolverhampton.—T.C. approved: Wolverhampton and District Co-operative Society, garage, Lower Stafford-st.; H. & J. N. Patten, 8 houses, Oxbarn-av.

Yiewsley, Drayton.—Council approved: 4 lock-up shops (corner of Ferrars-av.); 14 pairs of flats, Vine House estate, West Drayton, and 8 shops, Sipson-way, T. J. L. Davies.—Surveyor submitted lay-out plan for 34 houses on land, Falling-lane. Scheme was approved.

York.—New C. of E. church to be built on Tang Hall housing estate. Tenders invited. Architects, Ward & Leckenby, Museum-st.

WORKMEN'S COMPENSATION

"In the Course of Employment."

THERE has been an absence of cases lately raising the point whether when an accident occurs the workman is still acting "in the course of his employment," and the reason for this appears to be that there has been a tendency to regard this question as one of fact on which the arbitrator's decision will not be disturbed if there is evidence upon which it can be supported. Therefore a recent decision in the House of Lords in the case of Sparey *v.* Bath Rural District Council (*The Times*, November 17) appears to be of some importance. The facts were undisputed. The Council were tarring a narrow lane near Bath, and the workman's duty was to sweep a portion of the road above the section being tarred preparatory to the tarring. On July 5, 1929, at 5 p.m., the day's work ended; the foreman blew his whistle, and the men ceased work; but the appellant in this case, whilst on his way to get his bicycle on which he came to work, and which he had left just off the roadway, and whilst he was still upon that portion of the road that had been swept, in passing two horses which had been used in connection with the tarring process, was kicked by one of them and sustained injury for which he was claiming compensation. The sole question was whether the injury had been sustained "in the course of the employment," and the arbitrator had held that this was not the case, and the Court of Appeal had declined to disturb this finding on the ground that it was a question of fact. Lord Buckmaster, who delivered the only judgment yet reported, observed that the arbitrator's award can only be challenged on grounds the chief of which is that it involves an error in law, and the question whether or not an accident arose in the course of the employment may in many cases be a question of fact; but where all the facts are plain and beyond controversy the question whether those facts bring the case within the statute may well be a question of law, and he instanced the case of Stewart *v.* Longhurst (1917, A.C. 249; *The Builder*, April 6, 1917), where the Court of Appeal had reversed the finding of an arbitrator on this question, and the House of Lords had affirmed the Court of Appeal.

Lord Buckmaster then said that the question in this case was whether or not the circumstance that the accident occurred on the scene of the accident, though not within the boundary of the employer's premises, was sufficient to make it arise in the course of the employment. We quote the above passage from the report, but for the expression "employer's premises" we think the zone of the employment might be substituted, for the accident occurred on a public road. Lord Buckmaster then went on to say that he was not clear that the arbitrator himself treated the question as a question of fact, for, having stated the facts, he asked himself the question: "On those facts, did the accident arise in the course of the employment?" and his conclusion depended on the meaning of the statute; this would be a question of law. Turning to the statute, Lord Buckmaster is reported as having expressed his opinion as follows: That it was difficult on any known test to say that this accident arose in the course of the employment; that the course of employment does not necessarily cease with the conclusion of the day's work was certain; the course of the employment continues whilst the workman is lawfully on the employer's premises, and hazards which he then encounter will be risks which he has to run in the course of the employment; but when the premises are left, and the workman is no longer under any control and is in all respects and for all purposes in the same position as an ordinary member of the public, enjoying the same liberty and sharing the same risks, as was the case here, he cannot recover compensation under the Act. Lord Atkin alone dissented from the finding that this was not a question of fact.

Perhaps one word of explanation may be given in reference to this decision. It should be observed that it turned alone on the consideration as to whether the accident happened "in the course of the employment," and was based upon the fact that no element of employment existed at the time. The period of the employment was ended; the man was not under the control of the employer nor on premises in any sense under their control for the performance of the work for which he was employed, and therefore he was in the position of any ordinary member of the public. The case must not be confused with those cases when an employee, whilst acting on his employer's instructions, is exposed to the risk of street accidents. At one time it was considered that this question depended upon the frequency involved by the employment with which the risk had to be run, but this theory was disposed of in the case of Dennis *v.* White (1917, A.C. 479; *The Builder*, October 26, 1917), in which it was held by the House of Lords that the fact that the risk is common to mankind does not disentitle an employee from recovering compensation in such circumstances as for injury by accident arising out of, as well as in the course of, the employment. Incidentally, we may mention that in this case the House of Lords took the view expressed by Lord Buckmaster in the case we are considering, that the facts not being in dispute the question was not one of fact but of law.

PRICES CURRENT OF MATERIALS.*

Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry.

PRINCIPAL CHANGES OF THE WEEK.—Raw Linseed Oil is down in price by 3d. per gallon and Boiled by 2d. Turpentine increases by 5d.—4d. White Lead Paint is down by £2 per ton to £63 10s.

BRICKS, &c.

Per 1,000 Alongside, in River Thames up to London Bridge.

	£ s. d.
Best Stocks	4 3 6
Second Hard Stocks	3 18 6

Per 1,000. Delivered at London Goods Stations.

	£ s. d.		£ s. d.
Flettons, at King's Cross	2 11 3	Best Blue Pressed Staffs	9 5 0
Do., grooved for Plaster	2 13 3	Bo. Bullnose	9 15 0
Do., Bullnose	3 5 3	Blue Wire Cuts	7 5 0
White Midhurst Facing Bricks (delivered London site)			

Best Stourbridge Fire Brick:—
2½ in. ..... 8 11 0 3 in. 10 3 0

GLAZED BRICKS—

Best White Ivory and Salt Glazed Stretcher	21 0 0	D'ble Str'tch'rs	29 10 0
Headers	20 10 0	D'ble Headers One Side and two Ends	26 10 0
Quoins, Bullnose and 4½ in. Splays, and Flats	27 10 0	Two Sides and one End	30 10 0
		Squints	31 10 0
			28 0 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours Hard Glaze, £5 10s. extra over white.

BREEZE CONCRETE SLABS.
Delivered London.

	s. d.		s. d.
2 in. per yd. super	1 11	3 in. per yd. super	2 9
2½ in. " "	2 6	4 in. "	3 6

	s. d.	
Thames Ballast	8 0	per yd delivered 2 miles radius Paddington
Fit Sand	11 0	" "
Thames Sand	11 0	" "
Best Washed Sand	11 0	" "
¾ in. Shingle for Ferro-Concrete	8 0	" "
¾ in.	11 0	" "
¾ in. Broken Brick	10 6	" "
Pan Breeze	8 0	" "

Per ton delivered in London area in full van loads.
Best Portland Cement. British Standard Specification. Test £2 2 0 to £2 4 0
35s. alongside at Vauxhall in 80-ton lots.

Ferrocrete per ton extra on above	0 7 6
Vitocrete " "	0 7 6
Super Cement (Waterproof)	12 0
Ciment Fondu (F.O.R. Works)	4 15 0
Roman Cement	5 15 0
Parian Cement	5 15 0
Keene's Cement, White	5 15 0
" Pink	5 10 0
Plaste ,Coarse, Pink	3 0 0
" White	3 12 6
" Fine	5 12 0
Sirapite, Coarse	3 9 0
" Finish	3 17 0
Grey Stone Lime	2 10 9
Chalk Lime	2 10 9
Best Ground Blue Lias Lime	1 17 6
Hair per cwt.	2 2 6
Granite Chippings	1 12 0

NOTE.—Sacks are charged 1s. 9d. each and credited 1s 6d. if returned in good condition within three months carr. pd.
Stourbridge Fireclay in s'cks 37s. 0d. per ton at rly. dp.

STONE.

BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube ..... s. d. 2 10

BEER STONE—RANDOM BLOCK—
Free on rail at Seaton Station per ft. cube 2 3
Delivered free on rail Nine Elms, S.R., per ft. cube 3 1½
Selected approximate size one way, 1d. per cubic foot extra; selected approximately three sizes or for special work, 3d. per cubic foot extra.

PORTLAND STONE—
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube 4 4½
Do. do. delivered on road wagons at above stations, per ft. cube 4 5½
White basebed, 3d. per ft. cube extra.
NOTE.—1d. per ft. cube extra for every foot over 20 ft. *average*, and ½d. beyond 30 ft.

CHILMARK—RANDOM BLOCK—
At Nine Elms, per ft. cube 3 11

HOPTON-WOOD STONE—
F.O.R. Quarries, Wirksworth, Derbyshire, per ft. cb. 14 0
Random blocks from 10 ft. and over P. ft. cb. 14 0
Sawn two sides ..... " 22 6
Sawn three or four sides ..... " 27 6

YORK STONE, BLUE—*Robin Hood Quality.*
Delivered at any Goods Station, London
1 in. sawn two sides landings to sizes (under 20 ft. super) ..... Per ft. super 5 6
1 in. rubbed two sides, ditto ..... " 6 0
1 in. sawn two sides slabs (random sizes) " 2 3½
1 in. to 2½ in. sawn one side slabs (random sizes) ..... " 1 6½
1¼ in. to 2 in. ditto, ditto ..... " 1 3½

HARD YORK—
Delivered at any Goods Station, London.
Scappled random blocks ..... Per ft. cube 6 3
6 in. sawn two sides landing to sizes (under 40 ft. super) ..... Per ft. super 5 1½
6 in. rubbed two sides, ditto ..... " 6 1½
6 in. sawn two sides slabs (random sizes) " 2 1½
3 in. ditto ditto " 2 10
1 in. self-faced random flags ..... Per yd. super 8 0

CAST STONE.

Delivered in London area in full van loads, per ft. cube: Plain, 8s. 6d.; Moulded, 9s. 6d.; Cills, 10s. 0d.

WOOD.

GOOD BUILDING DEAL.

Inches.	per stan.	Inches.	per stan.
4 × 11	£24 10	3 × 6	£17 0
4 × 9	20 0	3 × 11	19 10
4 × 8	20 0	2 × 11	19 10
4 × 7	18 0	3 × 9	19 10
3 × 8	18 0	2½ × 9	19 10
3 × 7	18 0	3 × 4½	17 10
2½ × 7	18 0	3 × 4	17 10

PLANED BOARDS.

1 × 11	£22 10	1 × 9	£21 0

PLAIN EDGE FLOORING.

Inches.	per sq.	Inches.	per sq.
⅝	16/-	1½	25/-
¾	17/-	1¾	27/6
1	20/-		

TONGUED AND GROOVED FLOORING

Inches	per sq.	Inches.	per sq.
1	21/-	⅝	15/-
1¼	26/-	¾	16/6
1½	27/6	1	20/-

MATCHING (BEST).

Inches.	per sq.
⅝	15/-
¾	16/6
1	20/-

ins.	BATTENS.	s. d
¾ × 2	per 100 ft.	2 0

SAWN LATHS. s. d.
Per bundle 2 3

1 INCH AND UP THICK.
Average price for prime quality.

	£ s. d.
Dry Austrian Wainscot, per ft. cubs	0 15 0
Dry American and/or Japanese Figured Oak, per ft. cube	0 12 0
Dry American and/or Japanese plain Oak, per ft. cube	0 10 0
Dry sq. edged Honduras Mahogany, per ft. cube	0 14 0
Dry log-cut Honduras Mahogany, per ft. cube	0 16 0
Dry Cuba Mahogany, per ft. cube	1 1 0
Dry Teak, per ft. cube	0 14 0
Dry American Whitewood, per ft. cube	0 10 0
Best Scotch Glue, per cwt.	£4 10 0 to —
Liquid Glue, per cwt.	4 7 0 to 5 10 0

SLATES.

First quality slates from Bangor or Portmadoc carriage paid in full truck loads to London Rate Station. Per 1,000 actual.

	£ s. d.		£ s. d.
24 by 12	31 0 0	18 by 10	17 5 0
22 by 12	27 19 6	18 by 9	15 10 0
22 by 11	25 5 0	16 by 10	14 14 6
20 by 12	24 7 6	16 by 8	11 5 0
20 by 10	20 17 6		

TILES.

Delivered at London rate stations in full truck loads of not less than 6 tons. Per 1,000. f.o.r. London.

Best machine-made tiles from Broseley or Staffordshire district	£5 2 6
ditto hand-made ditto	5 7 6
Ornament l ditto	5 12 6
Hip and valley tiles (per dozen) Hand-made	0 9 6
Hip and valley tiles (per dozen) Machine-made	0 9 0

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION, PER TON—

R.S. Joists, cut and fitted	£12 10 0
Plain Compound Girders	14 10 0
" Stanchions	16 10 0
In Roof Work	19 10 0

MILD STEEL ROUNDS.—To London Station, per ton

Diameter.	£ s. d.	Diameter.	£ s. d.
½ in.	12 0 0	⅝ in. to ¾ in.	10 15 0
⅜ in.	11 0 0	¾ in. to 2½ in.	10 10 0

WROUGHT-IRON TUBES AND FITTINGS—
Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward, if sent from London Stocks.)

	Tubes. Wrought Mild Steel.	Tubes. Genuine Staffs. Iron.	Fittings. ½ in. and under.	Fittings. Over ½ in.	Flanges. ½ in. and under.	Flanges. Over ½ in.
	%	%	%	%	%	%
Gas	62½	50	45	47½	55	57½
Water	58½	46½	40	42½	50	52½
Steam	55	42½	35	37½	45	47½
Galv. gas ...	53	37½	35	37½	45	47½
Galv. water ...	45	32½	30	32½	40	42½
Galv. steam	40	27½	25	27½	35	37½

*C.I.—HALF-ROUND GUTTERS—London Prices ex Works

Per yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
3 in.	10d.	7½d.	2½d.
3½ in.	10½d.	8d.	2½d.
4 in.	10½d.	9½d.	2½d.
4½ in.	11½d.	10½d.	2½d.
5 in.	1/1½	11½d.	3½d.

*O.G. GUTTERS.

3 in.	1/0	10½d.	2½d.
3½ in.	1/0½	10½d.	2½d.
4 in.	1/1½	10½d.	2½d.
4½ in.	1/2½	1/0½	2½d.
5 in.	1/5	1/2½	3½d.

*RAIN-WATER PIPES, &c.

Per yd. in 6 ft. Pipe.		Bends, stock Branches angles, stock angles
2 in. plain	1/2½	9½d. 1/2
2½ in. "	1/3	10½d. 1/4
3 in. "	1/6½	1/1½ 1/8½
3½ in. "	1/11	1/4½ 1/11½
4 in. "	2/2½	1/7½ 2/4½

*The above R.W. Goods prices are subject to an advance of 5% from October 29th, 1929.

L.C.C. COATED SOIL PIPES—London Prices ex Works

	Pipe, angles, stock angles.	Bends, stock Branches. Pipe, angles, stock angles.
	s. d.	s. d. s. d.
2 in. per yd. in 6 fts. plain	2 1½	1 6½ 1 10½
2½ in. "	2 6	1 8½ 2 4
3 in. "	2 8	1 10½ 2 9½
3½ in. "	2 10½	2 4 3 3
4 in. "	3 3	2 7½ 3 9

L.C.C. COATED DRAIN PIPES—London Prices ex Works

	Pipe, angles, stock angles.	Bends, stock Branches, Pipe, angles, stock angles.
	s. d.	s. d. s. d.
3 in. per yd. in 9 ft. lengths	3 3	4 3 6 6
cwt. qr. lbs.		
4 in. "	1 1 20	4 3 5 2 8 10
5 in. "	1 2 22	6 3 9 0 14 3
6 in. "	2 0 6	6 11 10 11 18 1

Gaskin for jointing 41/- per cwt.

	Per ton in London. £ s. d.	£ s. d.
IRON—		
Common bars	10 10 0 to	11 0 0
Staffordshire Crown Bars Good merchant quality	10 15 0 to	11 10 0
Staffordshire Marked Bars	14 0 0 ...	15 0 0
Mild Steel Bars	9 10 0 ...	10 0 0
Steel Bars, Ferro-Concrete quality, basis price	8 0 0 ...	9 0 0
Hoop iron, basis price	11 0 0 ...	12 0 0
" Galvanised	27 0 0 ...	28 0 0
Soft Steel Sheets, Black—		
Ordinary sizes, to 20 g.	11 0 0 ...	11 10 0
" " " 24 g.	12 0 0 ...	13 0 0
" " " 26 g.	14 0 0 ...	15 0 0
Sheets Flat Best Soft Steel, C.R. and C.A. quality—		
Ordinary sizes, 6 ft. by 2 ft to 3 ft. to 20 g.	13 10 0 ...	14 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	14 10 0 ...	15 10 0
Ordinary sizes, 6 ft by 2 ft. to 3 ft. to 26 g.	17 10 0 ...	18 10 0
No. 1 quality £4 per ton extra.		
Flat and Galvanised Corrugated Sheets—		
Ordinary sizes 6 ft. to 9 ft. to 20 g.	13 0 0 ...	14 0 0
Ordinary sizes 6 ft. to 9 ft. to 22 g. and 24 g.	14 10 0 ...	15 10 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	16 10 0 ...	17 10 0
Sheets Galvanised Flat, Best quality—		
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	18 0 0 ...	19 0 0
Best Soft Steel Sheets. 22 g. and 24 g.	20 0 0 ...	22 0 0
Best Soft Steel Sheets, 26 g.	21 10 0 ...	23 0 0
Cut Nails, 3 in. to 6 in.	15 0 0 ...	16 0 0
(Under 3 in. usual trade extras.)		

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

LEAD, &c.

(Delivered in London.)	£ s. d.
LEAD—Sheet, English, 4 lb. and up	23 10 0
Pipe in coils	24 0 0
Soil pipe	27 0 0
Compo pipe	27 10 0
Old lead, ex London area, at Mills per ton	£13 10 0

NOTE.—Country delivery, 20s. per ton extra; lots under 3 cwt. 3s. per cwt. extra, and over 3 cwt. and under 5 cwt., 1s. 6d. per cwt. extra. Cut to sizes, 5s. cwt. extra.

COPPER.

	s. d.
Seamless Copper tubes (basis) per lb.	0 9½
Strong sheet "	0 10
Thin "	0 11
Copper nails "	1 0
Copper wire "	0 11

PLUMBERS' BRASS WORK.
Delivered in London.

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
29/-	45/-	76/-	153/-	246/-	510/- per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
41/6	62/-	92/-	174/-	300/-	588/- per doz.

RIVER PATTERN SCREW DOWN MAIN FERRULES.

½ in.	¾ in.	1 in.
39/6	60/-	116/6 per doz.

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
7/6	10/-	14/-	23/-	30/-	42/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
7/6	11/-	17/-	29/-	36/-	63/- per doz.

BRASS SLEEVES.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
10/-	12/-	20/-	24/-	31/- per doz.	

NEW RIVER PATTERN CROYDON BALL VALVES, S.F.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.
35/-	56/-	98/-	162/-	228/- per doz.

DRAWN LEAD P. & S. TRAPS WITH BRASS CLEARING SCREW.

	1¼ in.	1½ in.	2 in.	3 in.
5 lbs. P. traps	33/-	41/-	56/-	101/- per doz.
8 lbs. S. traps	35/-	45/-	66/-	126/- "

TIN.—English Ingots, 1/4 per lb. SOLDER.—Plumber's 8d., Tinmen's 9d., Blowpipe 10d. per lb.

*The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS—(*cont.*)

PAINTS, &c.

		£	s.	d.
Raw Linseed Oil, in pipes ..... per gallon ...		0	2	0
" " " in barrels ... " ...		0	2	2
" " " in drums ... " ...		0	2	5
Boiled " " in barrels ... " ...		0	2	6
" " " in drums ... " ...		0	2	8
Turpentine in barrels		0	4	9
" in drums (10 galls.) " ...		0	4	11
Genuine Ground English White Lead, per ton		47	10	0

(In not less than 5-cwt. casks.)
Extra for 1-cwt. kegs over 5-cwt. casks is 5/0 cwt.

GENUINE WHITE LEAD PAINT.

	£	s.	d.
"Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Morganwyte," "Polacco," "J" Brand, and other best brands (in 14-lb. tins) not less than 5 cwt. lots, per ton delivered ...	63	10	0
Red Lead, Dry (packages extra) ... per ton	33	0	0
Best Linseed Oil Putty ..... per cwt.	0	13	6
Size. XD quality ..... ftn.	0	3	0

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

Per ft.		Per ft.	
15 oz. fourths ...	2½d.	32 oz. fourths	7½d.
15 " thirds ...	3½d.	32 " thirds	9½d.
21 " fourths ...	3½d.	Obscured Sheet, 15 oz.	3½d.
21 " thirds ...	4½d.	" " 21 oz.	4½d.
26 " fourths ...	4½d.	Fluted, 15 oz. 7d., 21 oz.	9½d.
26 " thirds ...	7½d.	Em'lled, 15 oz. 4½d., 21 oz.	6d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED plate in CRATES OF STOCK SIZES. Per ft.

⅛ Rolled plate	4½d.
¼ Rough rolled	5½d.
Rough rolled	6½d.
Figured Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish White	5½d.
Ditto, tinted	8d.
Rolled Sheet	4½d.
White Rolled Cathedral	4½d.
Tinted do.	6½d.

Cast plate is same price as rough rolled.

"VITA" GLASS. Per foot. s. d.

Clear sheet—not exceeding 1 foot	1 0
Do. do. 2 feet	1 3
Do. over 2 feet	1 9
Polished plate—not exceeding 1 foot	1 6
Do. not exceeding 2 feet	3 0
Cathedral—not exceeding 1 foot	1 0
Do. larger sizes	1 6
Horticultural—for greenhouses, etc. Sizes up to 24 inches by 18 inches or not exceeding 3 feet	1 0
3/16 in. Wired Georgian Design. Sizes up to 108 inches long by up to 24 inches wide.....	2 6

VARNISHES, &c.

	Per Gallon.	£	s.	d.
Oak Varnish	Outside	0	14	0
Fine ditto	ditto	0	16	0
Fine Copal	ditto	0	18	0
Pale Copal	ditto	1	0	0
Pale Opal Carriage	ditto	1	4	0
Best ditto	ditto	1	12	0
Floor Varnish	Inside	0	18	0
Fine Pale Paper	ditto	0	18	6
Fine Copal Cabinet	ditto	1	2	6
Fine Copal Flatting	ditto	1	0	0
Hard Drying Oak	ditto	0	18	0
Fine Hard Drying Oak	ditto	0	19	6
Fine Copal Varnish	ditto	1	0	0
Pale ditto	ditto	1	12	6
Best ditto	ditto	1	2	6
Best Japan Gold Size		0	12	0
Best Black Japan		0	10	0
Oak and Mahogany Stain (water)		0	12	0
Brunswick Black		0	7	0
Berlin Black		0	14	0
Knotting (patent)		1	5	0
French and Brush Polish		0	17	0
Liquid Dryers in Terebene		0	9	0
Cuirass Black Enamel		0	7	0

L.M.B. Sports Association.

We give below results and tables in connection with the Football League of this Association :—

RESULTS.

Nov. 28.	Scafco 2 *v.* Higgs 5	
Dec. 5.	Higgs 5 *v.* Downs 2	
Dec. 12.	Scafco 2 *v.* Downs 3	
	Trocoll 2 *v.* Higgs 2	

TABLE TO DECEMBER 12.

	P.	W.	D.	L.	Goals F.	Goals A.	Pts.
Higgs ...	7	5	1	1	26	10	11
Trocoll ...	7	5	1	1	23	10	11
Holloway ...	3	3	—	—	8	2	6
Blue Circle...	6	2	—	4	12	17	4
Scafco ...	7	2	—	5	12	20	4
Downs ...	8	1	—	7	10	32	2

NEW BUILDINGS IN SCOTLAND

The Editor would be glad to receive information for publication under this heading from architects, builders, or other persons concerned. Items should be received at THE BUILDER *Office not later than Monday morning.*

Argyll.—ADDITIONS.—The C.C. approved the plans submitted by the County Engineer for additional school accommodation at Carnaigmore, Tiree, at an estimated cost of £11,000, and agreed to remit to a small committee the acceptance of tenders for additions to Oban High School.

Inverness.—AERODROME.—Inverness magistrates recommended the Town Council that the North British Aviation Co., Hooton Aerodrome, Cheshire, be informed that a site at The Longman, Inverness, proposed for a municipal aerodrome, could be available provided terms could be arranged.

Lanarkshire.—HOUSES.—Mr. P. C. Smith, County Architect, 13, Clydesdale-street, Hamilton, has prepared for the C.C. plans for 52 houses at Harthill and 6 at Newarthill. No contracts have yet been let.

Renfrewshire.—HOUSING.—The C.C. are inviting tenders for the erection of houses in various parts of the county.

St. Boswells.—HOUSING.—The Roxburgh C.C. are inviting estimates for 16 houses.

Wemyss.—HOUSES.—Forty-eight houses are to be erected on a site at Rosie, Wemyss, for the Fife C.C. Mr. G. B. Deas, Central-chambers, Kirkcaldy, is the architect, and tenders are now being invited.

PATENTS

APPLICATIONS PUBLISHED.

358,469.—A. Smith, F. R. Smith, and A. Smith : Means for excavating the ground and laying drain pipes or tiles after the manner of draining by hand, and apparatus connected therewith.

358,595.—Flangeless Pipe Co., Ltd. : Flangeless stoneware or concrete drain or sewerage pipe.

358,607.—Dorman, Long & Co., Ltd., and F. R. Freeman : Means for supporting the free ends of swing bridges.

358,621.—J. S. Fasting : Process and apparatus for preliminary treatment of raw material mixed for cement burning.

358,644.—S. Negishi : Method of manufacturing paint.

358,645.—S. Negishi : Method of manufacturing paint.

358,648.—E. Stuck, J. C. Sellers, and Roneo, Ltd. : Sheet-metal partitions or dividing-walls for buildings.

358,650.—Audley Engineering Co., Ltd., and W. H. Bateman : Taps or cocks.

358,691.—H. J. Wheeler : Geysers.

358,698.—H. J. Foundtain : Water-heaters or steam boilers.

358,707.—H. L. Hill : Emergency fire-escape.

358,708.—J. H. Bennetts : Clamping device for use in building construction and for similar purposes.

358,710.—J. Hopkinson : Domestic and like fireplaces.

Note.—Period for opposition expires December 21, 1931.

BUILDING TRADE WAGES IN SCOTLAND*

The following are the present rates of wages in the building trade in the principal towns of Scotland. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers—Masons'‡ Bricklayers'† Plasterers'.†
Aberdeen	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/8½
Airdrie	1/7	1/7	1/7	1/8	1/7	1/7	1/7	‡1/2½ †1/2½
Alexandria	1/7	1/7	1/7	1/8	1/7	1/7	1/7	‡1/2½ †1/2½
Arbroath	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1
Ayrshire	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Bathgate	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2 1/3
Berwickshire	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1½
Bo'ness	1/7	1/7	1/7	1/8	1/7	1/7	1/7	‡1/2½
Broughty Ferry	1/7	1/7	1/7	1/8	1/7	1/7	1/7	‡1/2½ †1/3½
Clackmannanshire	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/3½
Coatbridge	1/7	1/7	1/7	1/8	1/7	1/7	1/7	‡1/2½ †1/3½
Dumbartonshire	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/3½
Dumfries	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1
Dumfriesshire	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1½
Dundee	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Dunfermline	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Dunoon	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
East Lothian	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Edinburgh	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Falkirk	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Forfarshire	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1½
Fort William	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/3
Galashiels	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1
Glasgow	1/7	1/7	1/7	1/8½	1/7	1/7	1/7	1/3½
Greenock	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/3½
Hamilton	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7	‡1/2½ †1/3½
Hawick	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1
Helensburgh	1/7	1/7	1/7	1/8½	1/7	1/7	1/7	‡1/2½ †1/3½
Inverness	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	10d.–1/3
Inverurie	1/6½	1/6½	1/6½	1/7½	1/6½	1/6½	1/7	1/3
Kilmarnock	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/3½
Kincardineshire	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1
Kinross-shire	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Kirkcaldy	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Kirkwall	1/5	1/5	1/5	1/6	1/5	1/5	1/7	1/–
Lanarkshire	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/3½
Leith	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Midlothian	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Motherwell	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7	‡1/2½ †1/3
Peeblesshire	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1
Perth	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Perthshire	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1½
Peterhead	1/6½	1/6½	1/6½	1/7½	1/6½	1/6½	1/7	1/3
Renfrewshire	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/3½
Rothesay	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/3½
Roxburghshire	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1½
St. Andrews	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/3½
Selkirkshire	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1
Stirling	1/7	1/7	1/7	1/8	1/7	1/7	1/7	‡1/2½ †1/3½
Stirlingshire, West	1/6	1/6	1/6	1/6	1/6	1/6	1/7	1/1
Stornoway	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1
West Lothian	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Wishaw	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7	1/2½ †1/2½

* The information given in this table is copyright. The rates of wages in various towns in England and Wales are given on page 1013.

CURRENT PRICES FOR BUILDING WORK IN LONDON*

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	9	9
Add if in clay	,, ,,	1	0
Add for every additional depth of 6 ft.	,, ,,	0	6
Planking and strutting to trenches	per foot super	0	4
Do. to sides of excavation, including shoring	,,	1	0

CONCRETOR.

Portland cement concrete in foundation 1 to 6	per yard cube	27	0
Add if in underpinning in short lengths	,, ,,	6	0
Add if in floors 6 in. thick	,, ,,	2	6
Add if in beams	,, ,,	3	0
Add if aggregate 1 : 2 : 4	,, ,,	10	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	,,	2	0

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	30	0	0
Add if in stocks	,,	7	10	0
Add if in Staffordshire blues	,,	22	0	0
Add if in Portland cement and sand	,,	1	5	0

FACINGS.

Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	0	1½

POINTING.

Neat flat struck or weathered joint	,, ,,	0	0	3

ARCHES.

Extra only to the price of ordinary brickwork:—				
Fair external in half brick rings	,, ,,	0	0	10
Axed in stocks	,, ,,	0	1	9
Rubbed and gauged jointed in putty camber or segmental	,, ,,	0	6	0

SUNDRIES.

Damp course in double course of slates breaking joint and bedded in Portland cement	,,	0	1	0
Setting ordinary register grates and stoves	each	1	0	0
Setting kitchener, including forming flues, &c., with all necessary fire bricks		4	15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard super	4	6
Three-quarte -inch vertical damp course	,, ,,	9	6
Three-quarter-inch on flats in two thicknesses	,, ,,	6	0
Angle fillet	per foot run	0	3
Skirting and fillet 6 in. high	,, ,,	1	0

MASON.

York stone templates fixed	per foot cube	13	0
York stone sills fixed	,, ,,	22	0
Bath stone and all labour fixed	,, ,,	10	6
Beer stone and all labour fixed	,, ,,	15	0
Portland stone fixed	,, ,,	20	0
Chilmark stone fixed complete	,, ,,	17	6

SLATER.

Welsh 16 in. × 8 in. 3 in. lap, including nails	per square	72	9
Do. 20 in. × 10 in. Do. Do.	,,	80	9
Do. 24 in. × 12 in. Do. Do.	,,	90	0

CARPENTER AND JOINER.

Fir framed in plates	per foot cube	4	3	
Do. joists	,, ,,	4	9	
Do. roofs, floors and partitions	,, ,,	5	3	
Do. trusses	,,	7	9	
	¾"	1"	1½"	2"
Deal rough close boarding per sq.	32/6	38/-	43/-	70/-
Flat centering for concrete floor, including struts or hangers	,,	30	0	
Do. to beams	per ft. sup.	0	9	
Centre for arches	,,	1	6	
Gutter boards and bearers	,,	1	0	

FLOORING.	¾"	1"	1½"	1¼"
Deal-edges shot per sq.	—	42/6	50/-	57/6
Do. tongued and grooved ,,	—	47/-	56/-	64/-
Do. matchings ,,	44/-	49/-	—	—
Moulded skirting, including backings and grounds per ft. sup.	1/6	1/9	2/-	2/6

SASHES AND FRAMES		s.	d.
One-and-a-half moulded sashes or casements	per foot super	1	10
Two Do. Do. Do.	,, ,,	2	1
Add for fitting and fixing	,, ,,	0	3
Deal-cased frames with 1 in. inner and outer linings, 1½ in. pulley stiles tongued to linings, hard wood sills with 2 in. moulded sashes in squares, double hung, double hung with pulleys, lines and weights; average size	,,	3	9

DOORS	1½"	1¾"	2"
Two-panel square framed per ft. sup.	2/1	2/3	2/5
Four-panel Do. ,,	2/4	2/6	2/9
Two-panel moulded both sides ,,	2/6	2/9	2/11
Four-panel Do. Do. ,,	2/9	2/11	3/2

CARPENTER AND JOINER—continued

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per foot cube	14	0

		1"	1¼"	1½"
Plain deal jamb linings framed	per ft. sup.	1/7	1/8	1/11
Deal shelves and bearers	,,	1/4	1/6	1/9
Add if cross-tongued	,,	2d.	2d.	2d.

STAIRCASES.

	1"	1¼"	1½"	2"	2½"
Deal treads and risers in and including rough brackets	2/1	2/4	2/9	—	—
Deal strings wrot on both sides and framed	1/8	2/-	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. × 1¼ in.	per ft. run	0	9
Mahogany handrail average, 3 in. × 3 in.	,, ,,	6	0
Add if ramped	,, ,,	12	0
Add if wreathed	,, ,,	24	0

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/-
Sash fasteners	11½d.	Mortice locks	4/6
Casement fasteners	1/5	Patent spring hinges and letting into floor and making good	19/-
Casement stays	1/2		
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	15	3
Plain compound girders	,,	18	0
Do. stanchions	,,	20	9
In roofwork	,,	26	6

RAIN-WATER GOODS.

		3"	4"	5"	6"
Half-round plain rebated joints	ft. run	1/4	1/7	1/9	2/-
Ogee Do. Do.	,,	1/6	1/9	2/3	2/9
Rain-water pipes with ears	,,	1/6	2/4	—	—
Extra for shoes and bends	each	3/4	4/11	—	—
Do. stopped ends	,,	1/6	1/10	2/9	3/3
Do. nozzles for inlets	,,	2/2	2/7	3/10	4/3

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	40	0
Do. Do. in flats	,,	39	0
Extra labour and solder in coated cesspools	each	6	9
Welt joint	per ft. run	0	6
Soldered seam	,, ,,	1	3
Copper nailing	,, ,,	0	3

	½"	¾"	1"	1½"	2"	4"
Drawn lead waste per ft. run	1/1	1/7	1/10	3/-	3/6	—
Do. service ,,	1/6	2/-	2/5	3/6	—	—
Do. soil ,,	—	—	—	—	—	6/-
Bends in lead pipe each	—	—	—	—	3/-	6/6
Soldered stop ends ,,	1/-	1/4	1/9	2/6	3/2	—
Red lead joints ,,	11d.	1/-	1/3	1/11	2/4	4/10
Wiped soldered joints ,,	2/6	3/-	3/6	4/4	5/6	7/9
Lead traps and cleaning screws ,,	—	—	—	12/7	17/6	—
Bib cocks and joints ,,	6/4	9/7	15/4	41/-	—	—
Stop cocks and joints ,,	15/4	17/2	25/8	64/-	—	—

PLASTERER.

		s.	d.
Render, float and set in lime and hair	per yard sup.	2	3
Do. Do. Sirapite	,, ,,	2	6
Do. Do. Keen's	,, ,,	3	6
Add saw lathing	,, ,,	1	7
Add metal lathing	,, ,,	2	6
(Not including hangers or runners, etc. for suspended ceilings.)			
Portland cement screed	,, ,,	2	2
Do. plain face	,, ,,	3	3
Mouldings in plaster	per 1 girth	0	1½
One-and-a-half granolithic pavings	per yard sup.	5	3

GLAZIER.

		s.	d.
21-oz. sheet plain	per foot sup.	0	7½
26-oz. Do.	,, ,,	0	10
Obscured sheet	,, ,,	1	1
¼-in. rolled plate	,, ,,	0	9
¼-in. rough rolled or cast plate	,, ,,	0	10
¼-in. wired cast plate	,, ,,	1	3

PAINTER.

		s.	d.
Preparing and distempering, 2 coats	per yard sup.	0	9
Knotting and priming	,, ,,	0	7
Plain painting, 1 coat	,, ,,	0	9
Do. 2 coats	,, ,,	1	2
Do. 3 coats	,, ,,	1	9
Do. 4 coats	,, ,,	2	4
Graining	,, ,,	2	3
Varnishing twice	,, ,,	1	9
Sizing	,, ,,	0	3
Flatting	,, ,,	0	7
Enamel	,, ,,	1	1
Wax polishing	per foot sup.	0	6
French polishing	,, ,,	1	2
Preparing for and hanging paper	per piece, 2/- to 4/-		

*These prices apply to *new buildings only*. They cover superintendence by foreman and carry a profit of 10% on the prime cost without establishment charges. A percentage of ½ should be added for Employers' Liability and National Health and Unemployment Acts and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

BOOK REVIEWS

Elements of the Law of Contract. By W. G. H. Cook, LL.D. (Lond.), of the Middle Temple, Barrister-at-Law. Assisted by John W. Baggally, M.A. (Oxon), of the Inner Temple, Barrister-at-Law. London: Butterworth and Co., 1931. 5s. net.

This appears to us a really admirable little treatise on the law of contracts, with the law clearly stated, and the various propositions illustrated by examples taken so far as possible from modern cases. Undue complication has been avoided, and the authors' object, as stated in the preface, "to state as simply and as lucidly as possible, without undue use of technical terms, the law of England relating to contract," seems to have been fully attained So far as we have examined the work it seems to have been most accurately carried out, and the subject is clearly explained in very clear text. There is a table of Statutes and Cases and an index, and we have nothing but praise to bestow on this little work, which should be of service both to the lawyer and the layman.

Company Accounts and Balance Sheets. By K. and M. Moore. London: Jordan & Sons, Ltd. Price 5s. net.

This well-printed book should be in the hands of every business man whose duties include the management or perusal of company accounts. In a foreword Sir W. R. Morris says: "This book . . . does not seek to interest the trained accountancy or financial intelligence, but is written purely for the business man or company director who has had no particular training in accountancy and who may be only vaguely aware of his responsibilities in relation to accounts under the stringent provisions of the Companies Act, 1929. Among other subjects, fully indexed, the important subject of inner (or secret) reserves is fully dealt with.

A Manual of Rating (outside the Metropolis) for the use of Magistrates, Assessment Committees and Rating Authorities. By S. R. C. Bosanquet, K.C., Recorder of Walsall, and Percival Frere Smith, of the Inner Temple and Northern Circuit, Barrister-at-Law. London: Chapman & Hall. Price 25s. net.

The authors, in their preface to this work, state that their aim has been to present the principles of Rating Law "so that practical men who are concerned with everyday rating problems may be helped to solve them readily without the confusion of unnecessary reference to multitudes of decided cases which obscure rather than illuminate the solution of rating problems," and so far as we have been able to examine their work they appear to have attained their object. The text reads smoothly, uninterrupted by interpolation of the names and particular facts of cases or notes, but every statement is supported by reference to sections or cases placed at the foot of the page and referred to by small numerals; thus continuity in the text is attained, but reference is facilitated by the free use of paragraphs with catchword headings in large type.

Besides the text, the material Statutes, Rules and Orders are contained in the appendices and also the Resolutions of the Central Valuation Committee, and there is an index, so all necessary material is contained in this one volume. The only matter that we regret is omitted is a Table of Statutes and Cases, and possibly the authors, in their desire to produce a non-technical manual, felt that these were unnecessary. This volume is likely to appeal to others than mere laymen, and such Tables, whilst not in any way complicating the text, are of great assistance to those who already have some experience of the law on the subject; so we venture to make the suggestion that in a future edition they may be included.

The Railways (Valuation for Rating) Act, which was only passed July 10 of this year, is included in the Statutes in the Appendix and dealt with also in Chapter VIII.

EMPIRE TIMBERS

New Empire timbers which, although often remarkably beautiful, are practically unknown in this country, have been investigated by an expert amateur turner, Mr. A. L. Hetherington, who in his official capacity is an assistant secretary of the Department of Scientific and Industrial Research. Mr. Hetherington's experiences with 70 Empire hardwoods are published as a report by the Empire Marketing Board ("British Empire Hardwoods, from the Point of View of Turnery." H.M. Stationery Office, 2s. net.). Prefaces are contributed to Mr. J. H. Thomas, M.P., and Major Holtzapffel Budd, Past-Master of the Worshipful Company of Turners.

Red Els, Assegai wood, Bombonefene, Black Ironbox, Crow's Ash, Turpentine, Sisoo, Thinwin and Black Poison Wood were some of the queerly named lesser-known timbers that were turned. Woods from the United Kingdom, India, Ceylon, the West Indies, all parts of Africa and from our South American Colonies were investigated. Some of them have never before been used by ornamental turners in this country.

Mr. Hetherington made a little round box, with decorated sides and lids, from each of 70 different kinds of timber. The complete series of boxes is to be deposited in the Imperial Institute. A few of the most promising were then selected for special ornamental turning, such as chalices, goblets and decanter stands. Out of others were made egg-cups, ash-trays and bowls. Many of the timbers used are, in Mr. Hetherington's opinion, eminently suitable for ornamental turning. These include African Blackwood (East Africa), Gidgee (Australia), Burma Blackwood, Sapodilla (British Honduras), Cocus Wood and Lignum vitae (West Indies), Boxwood (India and Ceylon) and Andaman Bulletwood.

NEW CINEMAS

Aberdeen.—It is learnt that plans have been passed to enlarge the Electric Theatre, Union-street, Aberdeen, to seat 2,300. The proprietors are Aberdeen Picture Palaces, Ltd., 2, West Craibstone-street, Aberdeen.

Ayr.—A contract for excavation for and building of the super cinema for Mr. John McAlister, 59. Bath-street, Glasgow, at Main-street (Mr. Albert V. Glen, 164, Bath-street, Glasgow, architect), has gone to Messrs. Finlay & McGeechan, 8, Palm-street, Glasgow.

Leeds.—A contract for structural alterations at the Palace Picture House, Meadow-road (Mr. G. Alan Burnett, A.R.I.B.A., 76, Albion-street, Leeds, architect), has gone to Mr. W. H. Hylton.

Oxford.—It is learnt that Mr. Gilbert T. Gardner, F.R.I.B.A., 7, St. Aldate's, Oxford, has prepared plans for a cinema on a site near the Cowley-road, to hold 1,250 people.

Rotherham.—It is announced that Messrs. Regal Cinemas, Ltd., are considering erecting a cinema on a central site.

Sunderland.—It is learnt that the Avenue Theatre, Gill Ridge-avenue, has been acquired by Moss Empires and is to be rebuilt and converted into a cinema. The accommodation will be increased from 1,200 to 2,000. No architect has yet been appointed.

Swansea.—The T.C. has approved plans allowing for alterations and additions to the cinema, Neath-road, Landore, for Mr. W. Hyman.

Urmston.—Mr. W. Thornley, L.R.I.B.A., Wallgate, Wigan, is preparing plans for the erection of a super cinema at Urmston.

St. Mary's Hall, Coventry.

The death-watch beetle has been discovered in the timber of St. Mary's Hall, Coventry. The building is the ancient hall of the guilds of the city and was completed in 1414. A complete examination of the roof is to be made, but it is hoped that the damage has not extended to the main beams. The work will be carried out under Mr. E. H. Ford, the City Engineer.

NEW COMPANIES

The particulars quoted below have been compiled by Messrs. Jordan & Sons, Ltd., Company Registration Agents, of 116 and 117, Chancery-lane, W.C.2, from the documents available at the Companies' Registry.

Manor Estate (Cottingley Bar) Co., Ltd. (259,466). Registered October 7. Builders, etc. Nominal capital, £1,000. J. G. Jackson, Tyncroft, Tweedy-street, Wilsden.

Sunbeam Buildings, Ltd. (259,476). Registered October 7. Sunbeam House, Blossom-street, Ancoats, Manchester. To acquire land, buildings and hereditaments; to lay out land for building purposes, etc. Nominal capital, £8,000.

Alfred Clayton, Ltd. (259,961). Registered October 29. Westminster Bank-chambers, 76, Kingsland High-street, E.8. Builder, decorator, etc. Nominal capital, £100.

Smedley & Gray, Ltd. (259,985). Registered October 29. Charterhouse Repaint Works, Walsgrave-road, Coventry. Painters and engineers. Nominal capital, £1,500.

J. Disson & Sons, Ltd. (260,065). Registered November 2. 29a, Cochrane-street, N.W.8. Builders and decorators, etc. Nominal capital, £1,000.

Leightons (Contractors), Ltd. (259,970). Registered October 29. Public works contractors, and builders, contractors, etc. Nominal capital, £5,000. S. E. Leighton, Bridge Villa, Mill-road, Lowestoft.

Richard W. Gill, Ltd. (259,982). Registered October 29. 35, Hamilton-square, Birkenhead, Ches. Builder and contractor. Nominal capital, £1,000.

National Oil Burners, Ltd. (260,056). Registered October 31. Heating, lighting and ventilating engineers, etc. Nominal capital, £100. Dorothy B. Crosby, 31, Selwood-road, Sutton, Surrey.

Charles Turner (Southgate), Ltd. (259,994). Registered October 30. 10, Ulleswater-road, Southgate, Middlesex. Antique and architectural decorators, etc. Nominal capital, £300.

John Lock & Son, Ltd. (259,947). Registered October 28. 14, Marshalsea-road, S.E.1. Builders' merchants, etc. Nominal capital, £4,000.

Mayfair Builders, Ltd. (259,974). Registered October 29. 59, Maida Vale, W. Builders, contractors, etc. Nominal capital, £5,000.

Pitts, Ltd. (259,980). Registered October 29. Builder and contractor. At West Wickham, Kent. Nominal capital, £5,000.

Chas. Skinner & Son, Ltd. (260,023). Registered October 31. Lloyds Bank-chambers, 133, High-street, Stoke Newington, N.16. Builders, decorators and engineers. Nominal capital, £200.

West Lancashire Tile and Slabbing Co., Ltd. (259,987). Registered October 29. 35, Cookson-street, Blackpool. Builders and contractors, manufacturers of and dealers in tiles, slabs, etc. Nominal capital, £200.

Mountain, Ltd. (259,875). Registered October 24. Wallpaper merchants, general merchants, etc. Nominal capital, £1,000. H. Mountain, 47, Hyde Park-gate, S.W.7.

Wren's Property Development Co., Ltd. (259,935). Registered October 27. 61, Chancery-lane, W.C.2. Land, building and house property purchase company, etc. Nominal capital, £1,000. A. Blomfield, M.A., A.R.I.B.A., 1, New-court, Temple, E.C.4.

Artificial Graining, Ltd. (259,886). Registered October 26. Artificial graining and coloured and figured surfacing on wood, metal, stone, etc. Nominal capital, £1,500. H. Ridout, 8, Hoodcote-gardens, Winchmore Hill, N.21.

Industrial Colours, Ltd. (260,441). Registered November 18. Varnish, japan, and colour manufacturers and merchants, etc Nominal capital, £2,000. S. P. Lonergan, 29, Park-road, Ilford.

TRADE NEWS

"South Lodge," South Bolton Gardens.

We are asked to state that the builder of this house (illustrated in our last issue) was Mr. W. T. Yates, of Edmonton. Mr. D. Barclay Niven, F.R.I.B.A., is the architect.

Lloyd's Bank, Coulsdon.

In connection with our illustration in last week's issue of the new premises of Lloyd's Bank, Coulsdon, we learn that the purple facing bricks were obtained from Messrs. Benjn. Ware and Sons, Ltd., The Sussex Pottery Brick and Tile Works, Uckfield.

Building Science Abstracts.

Issued by the Department of Scientific and Industrial Research, "Building Science Abstracts," Vol. IV. (New Series), No. 10, for October, 1931, comprising Abstracts Nos. 1783—2009, have made an appearance. Price 9d. net (annual subscription 10s. net, post free), copies are obtainable from any of His Majesty's Stationery Offices.

Chichester Cathedral.

Messrs. Gething and Co., Chilmark, Salisbury, inform us that amongst other works, Chilmark stone is once again being used for the restorations to Chichester Cathedral, as well as for the restoration of the West Gate, Winchester, for H.M. Office of Works. It is also being used for large extensions to the County Offices at Winchester. The present building is of Chilmark stone, and was carried out in 1910.

January Income Tax: Employers' Scheme.

The Brilliant Sign Co. (1907), Ltd., of 131, Uxbridge-road, W.12, we are informed, being anxious to assist the Government as far as possible in regard to obtaining prompt collections, in the hope of balancing the Budget and thus avoiding a continuance of the present trade depression, have decided to advance the necessary amount to all employees, without interest, on the understanding that same is repaid by weekly instalments. This refers to all employees outside those who (under the co-operative scheme) receive a bonus according to their share holdings at the end of each year.

"Durus" Cast Stone.

Because of its adaptability to a wide variety of architectural and building requirements, its durability and comparative cheapness, the use of cast stone has greatly increased within recent years. A good cast or synthetic stone (the word "artificial" is not truly descriptive) should not be inferior to a natural stone if it is properly made of specially selected materials. Imperfections sometimes encountered in cast stone have been crazing and the breaking of arrises, but these can be, and have been, overcome by proper grading and curing. Experience has taught that crazing can be avoided by the grading of the aggregate, while the breaking of arrises, which is attributable to forced curing, by such methods as steam or hot air, will never occur if the stone is cured in the shop by the effluxion of time in a natural atmosphere and kept constantly wet. This is the belief of Messrs. D. G. Somerville and Co., Ltd., who manufacture the well-known cast stone known as "Durus," which is the result of twenty-five years of practical experience in concrete. This cast stone is scientifically compounded from selected all-British materials, and processed to ensure durability and pleasing texture and appearance. The facing is never less than 1 in. thick, and this retains its brightness longer than most natural stones, and has the same "sparkle" in its surface. All facing and backing materials are mixed by the latest type mechanically driven mixers. Every stone is carefully set out to detailed drawings. The manufacturers guarantee that the stone will withstand not less than 2,000 pounds per square inch in compression, and will not be affected by frost.

TENDERS

CHRISTMAS HOLIDAYS.

Owing to the Christmas Holidays, all Tenders intended for our next issue should reach "The Editor" by first post on Monday, December 21.

* *Denotes accepted.*
† *Denotes provisionally accepted.*
‡ *Denotes recommended for acceptance.*
§ *Denotes accepted subject to modifications.*
¶ *Denotes accepted by H.M. Office of Works and H.M. War Office.*

Aldergrove.—Workshops, stores and offices, for H.M. Air Ministry:—
*H. & J. Martin, Ltd., Ormeau-road, Belfast.

Annbank.—190 houses at Annbank housing scheme, for the Ayrshire C.C. Mr. William Reid, architect, County Offices, Wellington-square, Ayr:—
Bigger, brick and mason works, etc.—*William Govan & Sons, Main-street, Prestwick, and *George Reid, Avalon, Catrine, Ayrshire.
Plumber work, etc.—*R. & J. Jamie, 30, George-street, Ayr.
Plaster work, etc.—*William Shaw, 160, High-street, Irvine.
Joinery, carpentry and ironmongery works, etc.—*Alexander M. Inglis, 34, Grange-street, Kilmarnock.
Slater work, etc.—*Donald Hogarth, 40, Fort-street, Ayr.
Electric installation and fixtures—Peter Geddes, Beith.
Painting work, etc.—*A. E. McMillan, Deewater, Ochiltree, Ayrshire.
Glazing work, etc.—*George G. Kirk & Co., Ltd., 100, High-street, Ayr.
Iron fencing and gates—*Quintin McMillan, 6, Waggon-road, Ayr.

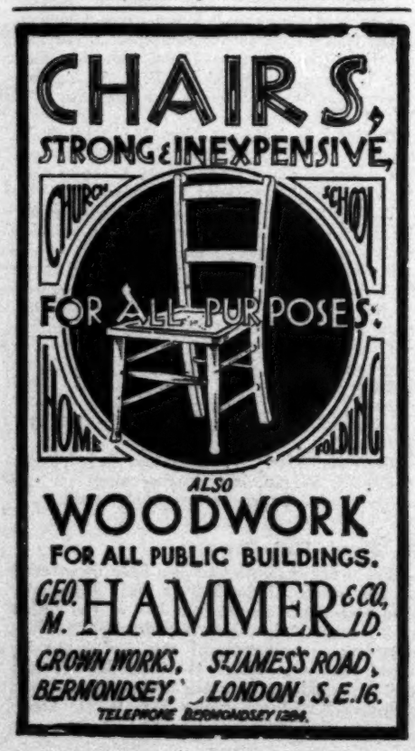
Ashford.—Alterations to Nos. 97 and 99, High-street. Mr. E. A. Jackson, L.R.I.B.A., architect, 13, North-street:—

A. E. Guest, Ltd., London	£4,886
W. P. Woodgate, High Halden	3,456
Hayward & Paramor, Folkestone	3,378
F. Knock, Ashford	3,351
Elmore & Son, Maidstone	3,259
G. Browning, Canterbury	3,248
W. Shippam, Ashford	3,257
R. J. Barwick, Dover	3,241
D. Godden & Son, Hamstreet	3,197
Rice & Son, Margate	3,156
J. B. Sharman, Ltd., Ramsgate	3,136
*C. I. Epps & Sons, Ltd., Ashford	2,972

Ballina.—Thirty cottages, for the U.D.C.:—
*Kilcawley, Maloney & Taylor, Enniscrone £9,780

Bedworth.—26 parlour-type houses at Bedworth Heath, for the U.D.C.:—
*A. Ward, Lythalls-lane, Coventry £9,204

Bedworth.—Public lavatories at Collycroft, for the U.D.C. Mr. W. H. Crowther-Green, engineer and surveyor:—
*T. G. Lee, Hinckley £296



Birmingham.—Installation of heating apparatus, etc., for the new Central Police Station, in course of erection in Steelhouse-lane, for the Corporation. Mr. Herbert H. Humphries, City Engineer:—
*Bagley & Parker, Ltd., Suffolk-street, Birmingham £2,900

Birmingham.—Alterations, etc., to property at 45, Bristol-street, for the Corporation. Mr. Herbert H. Humphries, City Surveyor:—
*Jeffery & Son, Ltd., Aston, Birmingham £550
(In place of tender withdrawn.)

Birmingham.—Showrooms, fitters' stores, etc., on a site off Birmingham-road, Sutton Coldfield, for the Corporation. Messrs. Peacock & Bewlay, FF.R.I.B.A., architects, 83, Colmore-row, Birmingham:—
*Maddocks & Walford, Tyburn-road, Erdington, Birmingham.

Blackpool.—Rebuilding of "Fairyland," on Central Beach, for Board of Directors. Mr. J. C. Derham, L.R.I.B.A., architect, Empress-chambers, Church-street:—
Steelwork—
*John Booth & Sons, Bolton.

Boston.—Additions to canning factory in Drainside, Skirbeck, for Messrs. J. & J. Beaulah, Ltd. Mr. Samuel Marjason, architect, Corporation Buildings, 36, Market-place:—
*A. & J. Main & Co., Ltd., Glasgow and London.

Boston.—Lavatories, pavilion and shelter in the Central Park, for the T.C.:—
*J. Colam £2,305 8

Brierfield.—Refuse destructor buildings at sewage disposal works, for the U.D.C. Mr. W. D. Haigh, engineer and surveyor:—
*Fred Muff & Sons, Barnoldswick.

Bristol.—Temporary huts at Connaught-road, Bedminster, for 420 junior mixed and infant children, pending the erection of permanent buildings, for the T.C.:—
*Stock & Collings, Bristol £1,457 10

Bury.—Branch shops in Gigg-lane, for the Bury Co-operative Society, Ltd., Knowsley-street:—
Builders—*John Tinline & Sons, Ltd., Bury.
Masonry—*F. M. & H. Nuttall, Ltd., Whitefield.
Plastering—*Lomax & Ormerod, Tottington.
Plumbing and glazing—*Arthur Booth, Bury.
Slating—*John Kay & Sons, Bury.
Paving—*William Pollitt & Co., Ltd., Bolton.
Steelwork—*Joseph Webb & Sons, Bury.
Asphalting—*Limmer & Trinidad Lake Asphalte Co., Ltd., Manchester.

Caxton and Arrington.—Pair of semi-non-parlour type houses at Kingston, for the R.D.C.:—
*Eagling, Reynolds & Co., Eaton Ford ..... £330 each house

Chester.—Painting of public elementary schools, for the E.C.:—
Cherry-grove Council (boys' department)—
*W. T. Williams & Son, 1, George-street, Chester £105 15
St. Peter's—
*W. T. Williams & Son, 1, George-street, Chester 54 0
George-street Council—
*G. Perkins, 30, Christleton-road, Chester 128 11
St. Mary's Junior—
*G. Perkins, 30, Christleton-road, Chester 81 15
College—
*Priddey & Son, 41, Foregate-street, Chester 150 4
St. Francis's—
*Priddey & Son, 41, Foregate-street, Chester 95 0

Chester.—Painting and decorating the School of Art, for the T.C. City Surveyor:—
*Taylor & Son, Queen-street, Chester... £132

Chester.—Settling tanks and filter beds, and other works appurtenant thereto in connection with the extension of the sewage disposal works, for the T.C.:—
*Matthews & Mumby, Ltd., Manchester £35,979

Chesterfield.—Extensions to offices, Brampton Iron Works, Shepley-street, for Messrs. Plowright Bros., Ltd.:—
*G. F. Kirk, Ltd., Chesterfield.

Clayton-le-Moors.—24 houses, on the Oakenshaw site, for the Council:—
*Blakeley & Son, Barnoldswick £7,280

Cockermouth.—Cast-iron pipes, etc., and construction of mass concrete reservoir in parishes of Dean and Eaglesfield, for the R.D.C. Mr. A. E. Simpson, engineer, Crecian Villa:—
Thos. Armstrong, Ltd., Cockermouth ... £6,943

Doncaster.—Extensions to factory at Wheatley, for Messrs. S. Parkinson & Son (Doncaster), Ltd. Mr. H. Slater, architect:—
*H. Arnold & Son, Ltd., Doncaster.

Dundee.—Granite work of the new block of municipal buildings:—
*Stewart & Co., Ltd., Bon-Accord Granite Works, Aberdeen.

Dundee.—For the Sandeman-street housing scheme, for the T.C. Mr. David B. McLay, City Architect:—

Digger, brick and mason works, etc.—
*C. Jones & Co., Glasgow £20,456

Plumber work, etc.—
*J. Robertson & Sons, 126, Princes-street, Dundee 5,223

Joinery, carpentry and ironmongery works, etc.—
*A. Bruce & Sons, 129, Clepington-road, Dundee 12,939

Electric lighting, etc.—
*Stenson & Co., 26, Carnegie Street, Dundee 1,020

Plaster work, etc.—
*W. Stenson & Son, 22, Rosebank-street, Dundee 3,233

Glazier work, etc.—
*G. G. Kirk, Ltd., 12, North Lindsay-street, Dundee 512

Slating work and roughcasting—
*Andrew Clark, 147, Rosebank-street, Dundee 3,997

Edinburgh.—Alterations at Warrender baths, for the T.C. Mr. E. J. MacRae, A.R.I.B.A., City Architect. Quantities by Mr. W. E. Gardner, 29, Joppa-road, Portobello:—

General building trades—
*W. Black & Sons, 150, Dundee-street, Edinburgh £748 0 0

Plumber work—
*D. Blake & Co., 10, Beaverhall-road, Edinburgh 124 5 0

Engineering works—
*Aimers MacLean Co., Ltd., Waverley Iron Works, Galashiels 1,678 17 9

Gillingham.—Show room at Rainham, for the T.C.:—

*A. W. Little & Co., Ltd. £1,072 6 6

Glasgow.—Work at sub-stations, etc. Mr. Herbert Bell, electrical engineer and manager, Waterloo-street:—

French-street sub-station—
Wolverhampton Corrugated Iron Co., Ltd., Wolverhampton £241 13 6

Dalmarnock canteen—
P. & R. Fleming & Co., 29, Argyll-street, Glasgow 108 18 6

Glasgow.—Temporary extension at St. Patrick's (Boys') School, for the Corporation. Mr. William McCaig, F.R.I.B.A., Education Offices, Bath-street:—

*J. & C. Fleming, public works contractors £745

Hinckley.—Extensions to the works in Southfield-road, for Messrs. Bennett Bros., (Hosiery Manufacturers & Dyers), Ltd., Southfield-road. Mr. E. H. Williams, J.P., F.R.I.B.A., architect, 13, New-street, Leicester:—

*W. M. Sharpe & Son, Ltd., Leicester.

Huddersfield.—Internal painting and decorating of the following properties for the Corporation:—(1) Firemen's houses, Alfred-street and East-parade; (2) open-air school, Woodhouse Hall, Fartown; for the C.B.:—

(1) *W. Littlewood & Sons, Berry Brow.
(2) *Ripley Bros., Birkby.

Huddersfield.—New block for out-patients, casualty, X-ray, therapy and other departments at Huddersfield Royal Infirmary, Portland-street, for the Board of Governors. Messrs. Calvert & Jessop and Joseph Berry & Sons, associated architects, 1, Market-walk:—

*T. Bottomley & Son, Huddersfield ... £75,000

Hyde.—Proposed Market building in Oldham-street, for the Corporation. Mr. J. H. Ward, Borough Surveyor:—

*Wellerman Bros., Ltd., Hyde.

Keighley.—Sunday school in Skipton-road, for Trustees of St. Mark's Church. Vicar, Rev. A. E. McGregor Greem, Head-lane, Utley. Mr. R. W Bailey, architect, Airedale-buildings, North-street:—

*J. Wharton, Keighley.

Keighley.—Painting 59 houses at Broomhill estate and 58 houses and 24 flats at Guard House estate, for the Corporation. Borough Architect, Gas Offices, Cook-lane:—

58 houses, Broomhill estate—
*Stanley C. Denison, Bradford-road, Riddlesden, Keighley ... £158 12 5

58 houses and 24 flats, Guard House estate—
*E. Thompson, 44, Low Bridge, Keighley 195 1 5

Kerry.—Repairs to Two Greeves Bridge, Castlemaine, for the C.C.:—

*Denis O'Shea £123

Kingston-upon-Hull.—Demolition, sheds, Queen's Dock, South Side, for the T.C. Mr. H. Hamer, Cit. Engineer:—

*J. J. Braimbridge & Son, Williamson-street, Hull £207

Leeds.—Demolition of existing buildings and erection of new offices and caretaker's quarters, for the exors. of the late Joseph Bateson. Messrs. Kitson, Parish, Ledgard & Pyman, architects, Lloyds Bank-chambers, Vicar-lane:—

*B. Coates & Sons, Ltd.

Lancashire.—Branch library at Prestwich, for the E.C. Mr. Stephen Wilkinson, F.R.I.B.A., County Architect, 16, Ribblesdale-place, Preston:—

Builders—
*John Tinline, Ltd., Bury £2,926
*Plumbing and glazing—*James Brown, Tottington.
*Plastering—*A. & S. Wallace, Newton Heath.
*Painting—*Frank Pilling, Ardwick.
*Roof tiling—*W. Altham, Bolton.
*Steelwork—*Redpath, Brown & Co., Ltd., Manchester.
*Appley Bridge stone—*Platt & Co., Ltd., Appley Bridge, near Wigan.
*York Stone—*Samuel Johnson & Son, Ltd., Milnsbridge
*Footpaths—*W. Pollitt & Co., Ltd., Bolton.

Lewes.—12 houses in North-way, for the T.C.:—

*C. Pannett & Son, Ltd. £4,545

¶**London.**—Tenders accepted by H.M.O.W. for the week ending December 12:—

London Docks South Quay Customs and Excise Offices—erection—A. Bedford, 19, Melbourne-road, Palmers Green.
British Museum Repository—steel shelving—W. Lucy & Co., Ltd., Eagle Iron Works, Oxford.
Haverton Hill Telephone Exchange, Yorks—erection—W. Pearson & Son, Burn-road, West Hartlepool.
Preston P.D.O.—erection—J. Turner, Bambers-yard, Preston.
Pagham Telephone Exchange—erection—West Sussex General Builders, The Hornet, Chichester.
Savings Bank—internal decorations—Sykes & Son, Ltd., 10, Essex-street, Strand.
Highbury (Birmingham) Telephone Exchange—erection—J. E. Harper & Sons, Ltd., 76-82, Lombard-street, Birmingham.

¶**London.**—The following works contracts have been placed by the War Office during the week ending December 10:—

Aldershot, Marlborough Lines, Hammersley Barracks—erection of barrack block—T. H. Jones, South Farnborough.
Catterick, R.A.O. Depôt—provision of steel shelving—Waddells (Stratford Steel Equipment), London, E.
Gosport, New Barracks—bath room annexes; and Gosport, Brockhurst—sanitary annexes—J. Hunt, Ltd., Gosport.
Lichfield—dining-room and wash-up—W. H. James & Sons, Sutton Coldfield.

London.—Chalet conveniences for both sexes at the junction of York-road and Podmore-road, Fairfield, and on Putney Lower Common, for the Wandsworth B.C.:—

*R. Cowper & Son, 1, Halford-road, Richmond £2,658 4 7

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London.—Wiring and fittings for electric lighting in blocks 4, 6 and 7 of dwellings at Glebe estate, Camberwell, for the L.C.C.:—

Burdette & Co., Ltd.	£2,213 1
Pinching & Walton	1,926 10
A. Dean & Co., Ltd.	1,878 10
Coleby & Co.	1,780 19
H. J. Cash & Co., Ltd.	1,732 0
Harland & Wolff, Ltd	1,627 10
W. H. Gane & Sons, Ltd.	1,594 10
The City Electrical Co.	1,540 12
*Hall & Stinson, Ltd., 33a, The Parade, Golders Green, N.W.	1,467 16

(All of London.)
(Chief Engineer's estimate: £1,809.)

London.—Erection of Lordship-road sub-station, for the Stoke Newington B.C.:—

Franks & Simons, Ltd.	£3,897
Sherrington & Jinks, Ltd.	3,640
The Anglo-Scottish Construction Co., Ltd.	3,672
F. R. Hipperson & Son	3,500
S. Hammond	3,432
The Eastern Construction Co.	3,417
G. Keetch & Sons	3,313
J. & J. Dean, Ltd.	3,003
The Ashford Builders Co., Ltd.	2,934
A. Bedford	2,900
Amended	2,934
*W. J. Cearns, Carpenters-road, Stratford, E.15	2,845

(All of London.)

Manchester.—Rebuilding the works recently destroyed by fire, for Messrs. W. W. Hill & Son & Wallace, Elton-street, Lower Broughton, Manchester. Messrs. Bain & Johnson, F. & L.R.I.B.A., architects, 38, Albion-street, Leeds:—

*Fred Mitchell & Son, Manchester.

Morecambe.—Extensions to the buildings, for Mr. J. Rigby, Wellington Private Hotel, Marine-road and West End-road. Mr. James Rigby, Junr., architect:—

*W. Huddleston, Morecambe.

Morley.—Six houses at Scotchman-lane:—

*Pawson Bros.

Newcastle-under-Lyme.—88 further houses on the Poolfield estate, for the T.C.:—

Lotz & Kier	£39,370
J. Cooke	33,440
T. Smith & Son	32,912
Butler Bros.	32,560
J. Edwards & Sons	32,380
J. Dolan & Son	31,680
W. Worthington	31,470
Eadie & Co.	30,624
W. J. Simms, Sons & Cooke, Ltd.	29,920
J. Gerrard & Sons, Ltd.	29,526
J. W. Thornley & Sons	29,040
Kearton & Jones	28,778
*T. S. Hedley & Sons, Ltd.	28,160

Newcastle-under-Lyme.—Work in connection with the proposed extension to cemetery, for the T.C.:—

E. Swift	£5,086 16 1
Martin & Element, Ltd.	4,684 9 3
F. G. Taylor	4,264 0 0
G. Clarke & Sons, Ltd.	4,138 11 3
Staffs Public Works, Ltd.	4,022 16 6
Sanders & Torrance	3,976 0 0
R. M. Douglas, Ltd.	3,867 3 0
W. P. Taylor & Co.	3,804 15 8
*P. Prendergast	3,745 19 1

Newcastle-under-Lyme.—Supply, delivery and fixing of the necessary fencing required for the extensions to be carried out at the cemetery, for the T.C.:—

W. Hayward & Son	£705 15 4
W. A. Baker & Co.	692 1 2
Hill & Smith	588 5 6
*Bayliss, Jones & Bayliss	585 6 0

Newcastle-upon-Tyne.—Warehouse for Messrs. Higginbottom, caterers, etc. Messrs. Liddle & Baxter, architects, 12, Eldon-square:—

*Stanley Miller, 17, North-street, Newcastle.

Newcastle-upon-Tyne.—Building of the new C. & A. Modes premises on the site of Singleton House, Northumberland-street, Newcastle:—

*Stanley Miller, North-street.

Northampton.—232 of the non-parlour type and 8 parlour houses, on the Kettering-road site, for the C.B.:—

‡A. Carter (Luton), Ltd. £84,836 2 6

(In lieu of previous tenders.)

Norwich.—Alterations and additions to 36, Surrey-street, for the Corporation:—

*Gill & Son £497

Pickering.—Reconstruction of vicarage, for Parochial Council of Parish Church, Appleton-le-Moors. Mr. W. Edwin Haslock, F.R.I.B.A., architect, 143, Albert-road, Middlesbrough:—

*Jaram & Son, Scarborough £3,054

Rugby.—Extensions to public baths in Regent-street, for the U.D.C. Mr. T. H. Sharp, engineer and surveyor:—

*W. H. Adams & Sons, Ltd., Rugby ... £4,822

Sheffield.—Installation of a hot water supply in 200 houses on the Wybourn estate, for the T.C. City Architect:—

*A. Plant £2,564

Salford.—Electricity sub-station in Prestwich; for the T.C. Mr. L. Romero, City Electrical Engineer, Frederick-road:—

*E. B. Jones & Rawlinson, Ltd., Salford.

Sillington.—Improvements at the chapels at the Netherton and Middlestown Cemeteries, for the U.D.C.:—

*Peace & Blackburn.

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Southampton.—Repairs, additions, painting and decorations at clinic, East Park-terrace, for the C.B.:—

A. B. Rose	£759 18
Brazier & Son, Ltd.	734 0
J. Bates & Sons	733 0
Jenkins & Sons, Ltd.	718 0
J. J. Udall's Building Co., Ltd.	681 0
W. A. Fussell & Son	669 0
R. H. Hammond	667 1
F. Kimber & Son	649 0
*H. Stevens & Co., Ltd.	616 0

Southampton.—Proposed new venereal disease clinic at rear of clinic, East Park-terrace, for the C.B.:—

Brazier & Son, Ltd.	£1,399 0 0
Jenkins & Sons, Ltd.	1,365 0 0
J. Bates & Son	1,310 0 0
F. Kimber & Son	1,288 0 0
H. Stevens & Co., Ltd.	1,286 0 0
J. Udall's Building Co., Ltd.	1,281 0 0
*A. Holley	1,237 1 11½

Strood.—Supply and laying of underground mains, and for the electrical installation at the isolation hospital, Whitehill-road, Gravesend, for the R.D.C.:—

*Alpha Manufacturing & Electrical Co., Ltd., 26, High-road, Balham, S.W.12.

Surbiton.—Public convenience at Claremont-gardens, for the U.D.C. Mr. Henry T. Mather, surveyor:—

F. G. Cressey, Ltd., Chiswick	£1,200
Limpus & Sons, Ltd., Kingston-on-Thames	1,138
Thorogood Bros & Sons, Surbiton	1,080
Vergine & Hansard, Surbiton	997
W. H. Gaze & Sons, Ltd., Kingston-on-Thames	983
C. H. King & Son, 40, Kingston-road, New Malden	948

Swansea.—Heating, etc., at the new civic buildings, for the C.B.:—

*G. N. Haden & Sons, Ltd., Trowbridge £13,711

Thedwastre.—4 semi-detached cottages, in the parish of Hessett. Messrs. Hunt & Coates, architects, 51a, Abbeygate-street, Bury St. Edmunds:—

*O. Seaman & Son, 9, Ipswich-road, Stowmarket £1,306

Wadsley.—Wiring in connection with the installation of electric lighting in the males wing at the Wadsley Mental Hospital, near Sheffield, for the West Riding Mental Hospitals Board. Mr. W. E. H. Burton, architect and engineer, West Riding Mental Hospitals Board, Wakefield:—

*T. W. Sampson, Sheffield £1,030

Wisbech.—Reconstruction of New Common Bridge, for the Isle of Ely C.C.:—

‡A. E. Farr, London, S.W.1 £3,973

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Wolverhampton.—Glazing work at the Wholesale Market Hall roof, for the T.C.:—

*Mellowes & Co., Ltd., Sheffield £522 15

Wombwell.—For (*a*) Sanitary conversions of 15 houses to water carriage system; (*b*) reinstatement of premises, 22, Goodyear-crescent, for the U.D.C. Mr. W. Quest, surveyor:—

(*a*)—*E. Saville & Co., Wombwell, near Barnsley £157

(*b*)—*Edward Oakland & Sons, Ltd., Pontefract-road, Cudworth 236

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